

1794  
LONDON  
PRINTED

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THE  
E P I T O M E  
OF THE  
ART of HUSBANDRY.

Comprizing all Necessary Directions for the Improvement of it, *Viz.*

Plowing, Sowing, Grafting, Gardening, Ordering of Flowers, Herbs; Directions for the Use of the A N G L E; Ordering of Bees: Together with the Gentlemans Heroick Exercise; Discoursing of Horses, their Nature, and Use, with their Diseases and Remedies: Of Oxen, Cows, Calves, Sheep, Hogs, with the Manner of Ordering them, their Diseases and Remedies.

Of the Nature of Marle, the best Way of Planting Clover-Grass, Hops, Saffron, Liquorice, Hemp, &c.

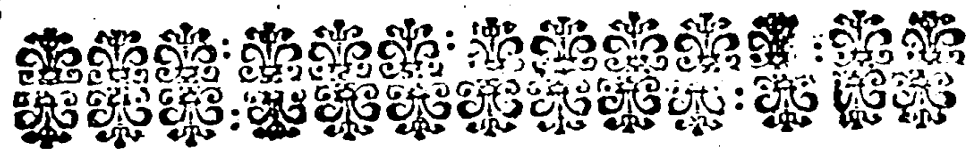
To which is Annexed by way of Appendix, a New Method of Planting Fruit-Trees, and Improving of an Orchard: With Directions for Taking, Ordering, Teaching, and Curing of Singing Birds, and other useful Additions.

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By J. B. Gent.

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L O N D O N, Printed for Benjamin Billingsley,  
at the Sign of the Printing-Press, in the Piazza of the  
Royal Exchange, over against Popes-Head-Alley,  
in Corn-Hill. 1675.



*Courteous Reader.*

**T**HIS Book of Husbandry hath been heretofore twice Printed, the good Success of the first Edition (notwithstanding it was neither Perfect nor Methodical) prevailed with the Author, to make several considerable Additions in the Second, all of which were the Fruits of diligent Observation confirmed by Reason, and most of them approved by his own Experience; and he understanding the Table not being

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*To the Reader,*

Alphabetically Printed, to give such Disgust to some Persons, as to make them to forbear to Purchase a Book so Necessary and Useful, at so small a Rate: Therefore to Comply with their Desires, he hath (in the Perusing thereof) taken such Care and Pains, that there can be no reasonable Pretence for further Complaint, and that one of the Meanest Capacity may readily find Remedies for all Distempers Incident to the most Useful and Necessary Creatures; with Instructions for Destroying all kinds of Vermin, and whatsoever is either  
an

*To the Reader:*

an Enemy or Annoyance to our pleasurable Profits. And now that the Book is arrived at a Third Impression, the Author (for the further Service of the Ingenious) hath added thereunto a small Tract concerning the Taking, Breeding, Ordering, Teaching, and Curing, of Singing-Birds, Exhibiting such Directions for that Purpose, as are both Approved and Recommended by Experience for Curiosities, worth the Knowledge of all such as Desires to Enjoy the Vernal Melody of the Woods all the Year long, at their own  
Home:



*To the Reader.*

Home: And now he doubts not but the Book may justly bear the Name of a Beneficial *Jewel*, of small Price; and questions not but the abundance of Variety, will Dispose the Reader to Peruse it often without Irksomeness, and then let his own Experience, the Mother of Truth, (when he finds those things Easie and Real, which at first seemed either Difficult or Impossible) bespeak his Approbation of these New Additions, which will be a further Incouragement to the Author, to set forth a Second Part of such New Experiments,

*To the Reader.*

ments, to serve this Age, as he once Intended to have Reserved as a Legacy to Posterity, for the Benefit of the Future.

*Vive, Vale, si quid novisti rectius istis,  
Candidus imperti; si non, his utere mecum.*

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THE



THE  
E P I T O M E  
OF THE  
ART of HUSBANDRY.

With the Antient Terms thereof, as they have been Used in several Counties of *England*: Together with the Chiefest, Choicest, and most Experimental Observations; as well of Former, as also our Modern more Refined Writers in Rustical Affairs.

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*Of the Diverse manner of Ploughs.*

**T**Here are Several makings of Ploughs, according to the Diverse manner of Countries; there are Ploughs of Iron, of diverse Fashions, which is Occasioned from the Diversity of Grounds and Soyls: Some are white Clay, some Red, some gravel Chiltern, some  
B Sand,

Sand, some Barren Earth, some Marled, and in many places Heath-ground; so that one sort of Plough will not serve in all places, therefore it is necessary to have diverse manner of Ploughs. In *Somersetshire* about *Cicester*, the Sharre-beam that in many places is called the Plough-head, is 4 or 5 foot long, and it is broad and thin. And that is because the Land is very tough, so as to soak the Plough into the Earth, if the Sharre-beam were not large, broad, and thin. In *Kent* they have other manner of Ploughs; some go with wheels, as they do in diverse other manner of places; and some will turn the Shell-bred at every Lands end, and plough all one way. In *Buckinghamshire* are Ploughs made of another manner, and also other manner of Plough-Irons, the which generally are good and likely to serve in many places; and especially if the Plough-beam and Sharre-beam were four Inches longer between the Sheath and Plough-tayl, that the Shell-bred might come more slope; for those Ploughs give out too suddenly, and therefore they are the worse to draw. In *Licester-shire*, *Lanca-shire*, *York-shire*, *Cambridge-shire*, *Lincoln-shire*, *Norfolk*, and many other Countries, the Ploughs are of diverse makings. But howsoever they are made, they are well Tempered, and go well.

*To know the Names of all parts of the Plough.*

**T**O inform those young Husbandmen that are Ignorant of the several Names of Ploughs, I shall express them as followeth: The Plough-beam is the longer Tree, above which is a little bend. The Share-beam is the Tree underneath; whereupon the Share

Share is set, The Plough-theath is a thin piece of dry wood made of Oak, that is set fast in a Mortess to the Ploughs beam, and also into the Share-beam, the which is the Kere or chief band of the Plough. The Plough-tail is that the Husband-man holdeth in his hand, and in the hinder end of the Plough-beam is put a long slit made in the same tail, and not set fast, but that it may rise up and go down, and it is pinned behind, and the same Plough-tail is set fast in a Mortess in the hinder end of the Share-beam. The Plough-stilt is on the right side of the Plough, whereupon the Rest is set: The Rest is a little piece of wood pinned fast upon the nether end of the stilt, and to the Share-beam into the further end. The Shelbred is a broad piece of wood fast pinned to the right side of the Sheath in the farther end, and to the utter side of the stilt in the hinder end: And the said Shelbred should come over the said Sheath and Senbred an Inch, and so go past the midst of the Share with a sharp edge, to receive and turn the Earth when the Culter hath cut it. There are two long stands in every Plough in the hinder end, set aslope between the Plough-tail and the stilt, to hold out and keep the Plough abroad in the hinder end, the one is longer than the other. The Plough-foot is a little piece of wood which is crooked and set before in a Mortess in the Plough-beam, set fast with Wedges to drive up and down; and it is a stay, to order of what deepness the Plough shall go. The Plough-ear is made of three pieces of Iron, nailed fast to the right side of the Plough-beam. The meaner sort have a crooked sort of wood pinned fast to the Plough-beam. The Share is a piece of Iron, sharp before, and broad behind, a foot long; made with

a Socket to be set on the further end of the Share-beam, the Culter is a bent piece of Iron set in a Mortise in the midst of the Plough-beam fastned with Wedges on every side, and the back thereof is half an Inch thick, and more than three Inches broad, made sharp before to cut the Earth clean; it must be well steeled, which will cause the easier draught, and the Irons for to last the longer. The Plough-wall is a piece of hard wood, with a pin put through, set in the Plough-beam in an Augure-hole.

*Of the Tempering of the Ploughs.*

**T**He knowledge of the tempering of the Plough is very expedient and necessary for a Husbandman, that he may Plough and turn clean, and make no Rest-balks. A Rest-balk is where the Plough biteth at the point of the Culter or Share, and cutteth not the Ground clean to the Furrow that was lately Ploughed, but leaveth a little Ridge standing between, the which breeds Thistles and other weeds. All these Ploughs should have all a like manner of tempering in the Irons: Howsoever one may temper for one thing in two or three places as for deepness; the foot is one, the setting of the Culter is another, and the third is at the Plough-tail, where are two wedges that are called Slote-wedges; the one is in the Slote above the beam, and the other is in the said Slote under the Plough-beam; sometimes the Husbandman will set both above, or both underneath; but always let him take good heed, and keep one general Rule, That the hinder end of the Share-beam always touch the Earth, that it may kill the Worms, or else it goeth not truly. The tempering to go broad or narrow, is in the setting

*Art of Husbandry.*

ting of the Culter, and with the driving of the same Wedges, Fore-wedges and Hind-wedge, which should be made of dry wood, and also the setting on of his share helpeth well, and is a cunning point of Husbandry, which mendeth and pareth much ploughing; it must lean much into the Furrow, and the point must not stand too much up nor down, nor too much into the Land, nor into the Furrow. Some Ploughs have a Band of Iron triangle-wise, set there as the Plough-car should be that hath three nicks on the further side: And if the Husbandman will have his Plough to go a narrow Furrow, as a side Furrow should be, then he must set his Foot-team in the nick next to the Plough-beam; and if he will go an ordinary breadth, he setteth it in the middle nick, that is best for stirring, and if he would go a broad Furrow, he setteth it in the uttermost nick, that is the best for following, the which is a good way to keep the Brede sound tempered, but it serveth not the deepness: And some men have instead of the Plough-foot, a piece of Iron set upright in the further end of the Plough-beam, they call it a Cock, made with two or three nicks, and that serveth for deepness. The Ploughs that go with Wheels have all a straight Beam, and may be tempered in the Iron, as the other are for the breadth, but their most special temper is at the Bolster, where the Plough-beam lieth, and that serveth for deepness and for breadth. They are good on even Ground that lieth light, but they are far more costly than the other Ploughs. And though these Ploughs be well tempered for one manner of Ground, that temper will not serve for another manner of Ground; but it must rest in the discretion of the Husbandman to know when it goeth well.

*Necessary things that belong to a Plough,  
Cart, or Wain.*

**B**Efore the Husbandman begins to Plough, he must have his Plough well ordered, and his Plough-Iron, his Oxen, or Horses, and all the Gear that belongeth to them, that is to say, Bowes, Yokes, Lades, Stickings, Wretheyne Teams. And before he doth Lade his Corn, he must have a Wain, a Capiock, or pair of Sleths, Wain-rope, a Pitchfork. This Wain is made of divers pieces, that will require great reparation, that is to say, the wheels, which are made of Nathes, Spokes, Tresses, and Dowls, they must be well fettered with wood or Iron, and if they are Iron-bound, they are much the better, although they are the dearer at the first, yet at length the Husbandman shall find them better cheap; for a pair of wheels Iron-bound will wear out seven or eight pair of VVheels, and go round and light after the Oxen or Horses to draw. Howsoever on Moorish Grounds and soft, the other wheels are better, because they are broader on the sole, and will not go so deep. They must have an Axle-tree clout, with eight VVain clouts of Iron, two Limpins of Iron in the Axle-tree end, two Axle-pins of Iron, or else of tough hard wood. The body of the VVain of Oak, the Staves, the nether Rathes, the over Rathes, Cross-sumner, the Keys and Py-staves. And if he go with a Horse or a Mare to Plough, then must he have his Hombers, or Colers, Holmes, whited Traises, Swingleters, and Tog. Also a Cart made of Ash, because it is light and like stuff to the VVain, and also a Cart-saddle,  
Back-

Back-bands and Belly-bands, and a Cart-ladder behind, when the Husbandman shall carry any Corn or other Provision. In many Countries there are VVains that have Cart-ladders both behind and before. Also the Husbandman must have an Ax, a Hatchet, a Hedging-bill, a Pin-auger, a Rest-auger, a Hail, Spade, and a Shovel: Many other things are belonging to Husbandmen which will be very costly, therefore it will be necessary for him to make his Yokes, Ox-bows, Stoles, and as many other things as he can of his Plough-gere.

*Whether is better a Plough of Horses, or a  
Plough of Oxen.*

**I**N some places a Horse-plough is better than an Ox-plough, that is to say, in every place where the Husbandman hath several Pastures; for the Horses may be Teddered or Tyed upon their Leys, Balks, or Hades, whereas Oxen may not be kept, and it is but in few places that they are used to be teddered. And Horses will go faster than Oxen on even or light Ground, and quicker in Carriages, but they are far more costly to keep in VVinter, for they must have both Hay and Corn to eat, and straw for Litter: They must be well shod on all four feet, and the Gear that they draw with is more costly than that of Oxen, and will last but for a short time. The Oxen will eat straw and a little Hay, the which is not half the cost that is required for Horses, neither are they shod. Therefore where the Husbandman hath several pastures to put his Oxen in when they come from their work, there the Ox-plough is the better. For an Ox must not endure his work to

labour all day, and then be put on the Commons, or else before the Herdmen, all night without Meat, and to go to his Labour in the Morning: But if he be put in good pasture all night, he will labour lustily all the day. Moreover Oxen will Plough in tough Clay and hilly Ground where Horses will stand still. If any Disease come to the Horse, or the Horse grows old, bruised or blind, then he will be little worth: And if any Disease come to an Ox, that he grows old, bruised, or blind, for a small matter he may be Fatted, and then he is mans meat, and as good or better than ever he was; whereas when the Horse dies, he is but Carrion.

*Of Horses and Mares to Draw.*

**A** Husbandman cannot be without Horses or Mares, or both, and that more especially if he go with a Horse-plough, he must have both, his Horses to draw, and his Mares to bring Colts to uphold his stock; the Mares must not bear Sacks, or be ridden upon, or go Journeys when they are with Foal, and especially when they have gone with Foal, twenty or twenty three weeks, for then there is great danger; for if she be then ridden upon and fet up hot, she will cast her Foal, which will prove a great loss to him that owns her: For she will labour and bear when she hath Foaled, and draw when she is with Foal as well as the Horse. It is convenient for the Husbandman to know when his Mare should be Horsed. It is the common saying, that she will take Horse within nine or ten days next after she hath Foaled, but I am not altogether of that opinion; and if she so do, she will not hold there-

thereto, for that Horse doth force and drive her to it: But twenty days after it is time enough to bring her to a Horse, for otherwise she will not hold to it, except she be very eager of Horsing: And that may be known by her shape, for that will twirl about and close again many times in an hour. And then bring her to a Horse, and let her be with him a day or a night, and that is sufficient; for it is better to keep the Horse from the Mares, than to go with them, for divers causes, and that more especially for that the Horse shall be more lusty, and more Foals may be got: But that Husbandman that hath many Mares will have too little leasure to attend them, but let them go together, and happy be lucky. Some men do hold an opinion, that put a Horse to a Mare in the beginning of the Moon, after it be prime, that he shall get a Horse-foal; others hold the contrary, that if a Horse be put to a Mare in the old of the Moon, he should get Horse-foals. I hold that it maketh no matter whether, for I have proved it, that a Mare is most able to bear the Horse from *May-day* to *St. Bartholomews-day*; for I have had Horses that have gone into my Mares both day and night, and at the Foaling time, I have had upon one day a Horse-foal, and on the next day and second a Mare-foal, and on the third and fourth day next after a Horse-foal, and on the next day or second a Mare-foal, and on the third or fourth day next after a Horse again, and so every week of both sorts; whereas by their opinion or reason, I should have fourteen days together Horse-foals, and other fourteen days together Mare-foals. But of one thing I am certain, that some one Horse would get more Horse-foals than some other Horse will do; and like-

likewise a Mare will bear more Mare-Colts than some other Mares will do, though they are Horfed with one Horse; neither can I give any reason why, except the Lustiness of the Natures of both of them are put to it, whether of them should have the domination. But if the Husbandman have Mares of divers colours, let him sever them in divers parcels, and let him put to his white Mare a gray horse, and his gray Mare a white Horse, so that he be not all white skinned about the mouth; and to a Mare of colour that hath no white upon her, a coloured Horse that hath much more white on him, and to his coloured Mare a mean white Horse of colour main white. And thus shall the Coltes be well coloured. And if a white Horse be put to a coloured Mare, she shall have most commonly a sandy Colt like to an Iron-gray, neither like Sire nor Dam. Howsoever, I have known many Mares that will have their Colts like the Horse that got it, the which is against the kind of Mares; for a man had rather get one good Horse than many Mares that are not so likely to prove well.

*To carry Wood and other Necessary.*

**I**N *May* when the Husbandman hath Fallowed the Ground, and set out his Sheep-fold, and carried away the Dung and Muck, if he have any Wood, Coal, or Timber to carry, or such other necessities, that must needs be done with the Cart or Wain, then is the time to do it. For then the way is like to be fair and dry, and the days long, and at that time the Husbandman hath least to do in Husbandry.

*To*

*To carry out Dung and Muck and spread it.*

**I**N the latter end of *April*, and the beginning of *May*, is the time for the Husbandman to carry out his Dung or Muck, and to lay it upon his Barley-ground. And where he hath Barley this year, let him Sow it with Wheat or Rye, and the next time that it is Fallowed, he shall mow all his Lands over at every second Fallow. But that Husbandman that can find the means to carry out his Dung, and doth lay it upon his Land after it be once stirred, it is much better for him than to lay it upon his Fallow, for divers causes: One is, that if it be laid upon his Fallow, all that falleth upon the hollow ridge, it shall do little good; for when it is ridged again, it lieth so deep in the Earth, that it will not be easily ploughed up again, except that when he hath spread it, he will with a Shovel or a Spade cast out all that is fallen in the ridge. And if it be laid upon the stirring, at every ploughing it shall meddle the Dung and the Earth together; the which shall cause the Corn to Grow and Increase much the better. In some places they load not their Dung till Harvest be done: This hath been a Custom on the furthest side of *Darbyshire*, called *Scarfedale*, *Halonshire*, and so Northwards towards *York* and *Rippon*, and that I call better than upon the Fallow, and especially for Barley. But upon the first stirring it is best for Wheat or Rye, and that the Husbandmans Dung be laid upon small heaps nigh together, and to spread it even, and to leave no Dung there as the Muck-heap stood; for the moistness of the Dung shall cause the Ground to be Rank enough:

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*The Epitome of the*

enough: And if it be meddled with Earth, it will last the longer, and better for Barley than for wheat or Rye, because of VVeeds, Horse-dung is the worst Dung that is. The Dung of all manner of Cattel that chew their Cud, is very good, and the Dung of Doves is best, but it must be laid upon the Ground very thin.

*The first Stirring.*

**I**N June is the time to rig up the Fallow, the which is called the first Stirring; and then let the Husbandman plough it as deep as he can for to turn the roots of the VVeeds upwards, that the Sun and the dry weather may kill them; for he cannot conveniently plough his Land, and load out his Dung both upon one day with one draught of Beasts, but he may well enough Load out his Dung before Noon, and he may load Hay or Corn in the Afternoon with the same Draught, with no hurt to his Cattel, because in loading of Hay or Corn, the Cattel are always currying or biting, which they cannot do in loading of Dung, or ploughing.

*The second Stirring.*

**I**N August, or the beginning of September, is the time for the Husbandman to make his second Stirring, and most commonly it is cast down and ploughed a main Furrow not too deep, and so he turns it clean. But if it be cast, it should be water-furrowed between the Land there where the Rain uses to be, that it may be drier when the Land shall be sown; and if the Lands lie high in the Ridge, and high at the Rain, and low in the midst of the side, that

that the water may not run easily into the Rain, as I have observed from time to time in many places, then let the Husbandman set his Plough three or four Foot from the Rigg, and cast all the Rigg on both sides, and when the Rigg is cast, let him set his Plough there as he began up to the remainder of the Land, and so will the Land both be Cast and Riggged, and all at one Ploughing: And this shall cause the Land to lie round when it is sown at the next time, and thus shall the Corn be saved from drowning.

*To Harrow all manner of Corn.*

**W**Hen the Lands are Ploughed, and the Corn sown, it will be convenient that they should be well harrowed, or else Crows, Pidgeons, will eat, devour, and bear away the Corns. It is the custome in many Countries to have all an Ox-harrow, the which is made of six small pieces of Timber called Harrow-Bulls, made either of Ash or Oak; they are of two yards long, and as much as the small of a mans Leg; they have shots of wood put thorow them, like Laths, and in every Bull are six sharp pieces of Iron called Harrow-tynds, set somewhat slope forward, and the former slope must be bigger than the other, because the fore-beam must be fastned to the same with a shackle or with a wyth to draw by. This Harrow is good to break the great Clots, and to make much Mould, and then the Horse-harrows to come after to make the Clots finaller, and to lay the Ground even. It is a great labour and pains for the Ox to go to harrow, it is more easie and better for them to go to Plough two days, than to Harrow one day. It is an old saying:

*The*



*The Ox is never wo,  
Till he to the Harrow go.*

And the reason is, because the Harrow goeth by twiches, and not always after one draught. The Horse-harrow is made of five Bulls, not above an Ell of length, and not so much shotted and tinded. And when that the Corn is well covered, then it is Harrowed enough: There are Horse-harrows that have tines of wood, and those are used much about *Rippon*, and some other places where he may border stones, for those stones would wear the Iron too soon. And those tines are most commonly of the Ground-end of a young Ash; they are more than a foot long in the beginning, and stand as much above the Harrow as beneath. And as they wear or break, they drive them down lower, they should be made long before that they are used, that they may be dry; for then they will indure and last much better, and stick the faster. The Horses that shall draw these Harrows, must be well kept, and shod well, or else they will be soon tired, and sore beaten that they will not be able to draw; they must have Hombers or Collers, Holms writhed about their Necks, Tresses to draw by, and a Swingle-tree for to hold the Tresses, and a Togewith betwixt the Swingle-tree and the Harrow. And if the Barley-ground will not break with Harrows, but be clotty, it should be beaten with Mauls, and not strait down; for then the Corn will be beaten into the Earth. And if they beat the Clot on the side, it will the better break, and the Clot will be the lighter, that the Corn may come by the lighter. Some use to roll  
their

their Barley-ground after a showre of Rain, to make the Ground to be the evener to Mow.

*To Fallow.*

**W**Hen the Husbandmen have sown their Pease, Beans, Barley, and Oats, and harrowed them, it will be their best time to Fallow in the latter end of *March* or *April*, for Wheat, Rye, and Barley, and let them do the best that they can to plough a broad Furrow, and deep, so that they turn it clean, and lay it flat, that it rear not an edge, the which will destroy all the Thistles and Weeds: For the deeper and the broader that it goeth, the more new Mould, and the greater Clots shall they have, and the greater Clots, the better Wheat; for the Clots keep the Wheat warm all the Winter, but at *March* they will melt and break, and fall into many small pieces; the which is a new Dinging and refreshing the Corn, and likewise there shall be but few Weeds grow upon the Fallows that are Fallowed, for the Plough goeth underneath the Roots of all manner of Weeds, and turneth the Root upwards, that they may not grow. And if the Land be Fallowed in the Winter-time, it will be far the worse, for these three causes: One is, all the Rain that falleth, shall waste the Land, and drive away the Dung, and the good Mould, that the Land shall be much the worse. Another cause is, the Rain shall beat the Land so flat, and bake it so hard together, that a dry *May* coming, it will be too hard to stir in the Month of *June*. The third cause is, the weeds shall take such Root in the stirring time, that they will not be clean turned underneath, the which shall  
be

be a greater hurt to the Corn, when it shall be sown, and especially of the time of weeding of the same, and for any other thing, make a deep hollow Furrow in the Ridge of the Land, and let the Husbandmen look well that the Rest balk it not; for if they do, there will be many Thistles, and then they shall not make a clean Ridge at the first stirring, and therefore it must be deeply Ploughed, or else it will not turn the Weeds clean.

*How to Plough all manner of Times of the Year.*

**T**He Ploughs being made and tempered, as I have already expressed, it will be convenient to inform the young Husbandman how he should plough all times of the Year. In the beginning of the year, after the Feast of the *Epiphany*, it will be time for the Husbandman to go to the Plough; and if he have any Leys to Fallow or sow Oats upon, first plough them that the Grass and the Moss may Rot, and plough them a deep square Furrow, and in all manner of Ploughings, let him look that his Eye, and his Hand, and his Feet do agree, and that they are always ready the one to serve the other, to turn up much Mould, and lay it flat, that it rear not up an Edge; for if it rear an Edge, the Grass and Moss will not Rot, and if he sow it with Winter-Corn, as Wheat or Rye. as much Corn as toucheth the Moss, will be drowned; for that the Moss doth keep such a wet and moisture in it self. In some Countries, if a man Plough deep, he shall pass the good Ground, and have but little Corn, but that Countrey is not fit for men to keep Husbandry upon, but to Rear and bring up Cattel and Sheep;  
for

for otherwise they must go beat their Grounds with Mattocks, as they do in several places in *Cornwall*, and in some parts of *Devonshire*.

*How to Plough for Pease and Beans.*

**F**irst the Husbandman must take notice, which is the most Clayie Ground, let him Plough that first; but let it lie a good space before that he sow it, because the Frost, the Rain, the Wind, and the Sun, may soon cause it to break small, to make much Mould, and to Ridge it, and to plough a square Furrow, the breadth and the deepness all one, and to lay it close to its Fellow: For the more Furrows, the more Corn serves, as hath been said, for a general Rule for all manner of Corns, which may be proved at the coming up of all manner of Corns, if the Husbandman do but stand at the Lands end, and look towards the other end, and he shall easily perceive how the Corn groweth.

*How all manner of Corn should be sown, and how much most commonly on an Acre.*

**F**irst of Pease and Beans. An Acre of Ground by the Statute, that is to say, sixteen Foot and an half to the Perch or Pole, four Perches to an Acre in breadth, and eleven Perches to an Acre in length, may be very well sown with two *London* Bushels of Pease, that is but two Strikes in other places; and if there be the fourth part Beans, then will it require half a *London* Bushel more; and if it be half Beans, it will have three *London* Bushels, and more; if it be of Beans, it will have four *London* Bushels  
fully,

fully, and that is half a Quarter, because the Beans are great, and grow up straight, and do not spread and grow abroad as Pease do. An Acre of good Beans is worth an Acre and an half of good Pease, because there will be more Bushels: And the best property that belongeth to a good Husbandman, is to sow all manner of Corn thick enough, and especially Beans and Barley; for commonly they are sown upon rank Grounds, and good Ground will have the burden of Corn and of Wood: And as much Ploughing and Harrowing hath an Acre of Ground, and sow thereupon but one Bushel, and another soweth four Bushels: And undoubtedly one Bushel will not give so much Corn again as the four Bushels, though the three Bushels that be sowed more, be allowed and set apart. And one Bushel and a half of white Pease or green Pease, will sow as much Ground as two Bushels of gray Pease, and that is, because they are so small, that the Husbandman need not to take so great a handful. In some Countries they begin for to sow Pease soon after *Christmas*, and in some places they sow both Pease and Beans underfurrow, and those of reason must be sowed betimes; but generally to sow after *Candlemas*, is found to be a good season, so that they are sown towards the beginning of *March*, or thereabouts. But especially let them be sown in the old of the Moon: For the opinion of the most expert Husbandman is, that they will Cod the better, and ripen the sooner. But I speak not of Hailings, for those are to be sown before *Christmas*.

How

## How to Sow Wheat and Rye.

**A**Bout *Michaelmas* is the time to sow both Wheat and Rye. Wheat is most commonly sown under the Furrow, that is to say, cast it upon the Fallow, and then plough it under: And in some places they sow their Wheat upon their Pease-stubble, the which is never so good as that which is sown upon the Fallow; and that is used where they make Fallow in a Field every fourth year. In *Essex* they use to have a Youth to go in the Furrow before the Horses or Oxen, with a Bag or a Hopper full of Corn, and he taketh his hand full of Corn, by little and little casteth it in the same Furrow. This Boy, as I suppose, ought to have somewhat more than ordinary discretion: Howsoever there is much good Corn and Rye most commonly sown above and harrowed, two *London* Bushels of Wheat and Rye will sow an Acre. Some Ground is good for Wheat, and some for Rye, and some for both, and upon that good Ground sow blend-Corn, that is, both Wheat and Rye, which is the surest Corn of growing, good for the Husbandmans household. And this Wheat that shall be medled with Rye, must be such Wheat as will soon be ripe, and that is flaxen Wheat, pole ear'd Wheat, or white Wheat. There are divers kinds of Wheats: Flaxen Wheat, hath a yellow Ear, and bare, without Ayns, and is the brightest Wheat in the Bushel, and will make the whitest Bread. This Corn will wear the ground very much; the straw of it is small, but it grows very thick, and is but small Corn. Pouce-car'd V Wheat hath no Ayns, 'tis thick set in the Ear, and

and it will soon fall out; 'tis greater Corn, and it will make white Bread. White Wheat is like Pole-ear'd wheat in the Bushel, but it hath Ayns, and the Ear is four square, and it will make white Bread. In *Essex* they call flaxen Wheat, white Wheat. Red Wheat hath a flat Ear, an Inch broad, full of Ayns, it is the greatest Corn, the broadest Blade, and the greatest Straw; it will make white Bread, though it be the ruddiest of colour in the Bushel. English Wheat hath a dun Ear, it hath few or no Ayns, and it is the worst Wheat, except Peck-wheat. Peck-wheat hath a read Ear, full of Ayns, thin set, and oft-times it is flinted, that is to say, small Corn wringled and dried; it will not make white Bread, but it will grow upon cold Ground.

*To Sow Barley.*

EVERY good Husbandman hath his Barley-Fallow well Dunged, lying ridged all the deep and cold of the Winter; the which ridging makes the Land to lie dry, and the Dinging maketh it to be mellow and rank. And if a dry Season comes before *Candlemas*, or soon after, it should be cast down, and water Furrowed between the Lands, and in the beginning of *March*, ridge it up again; sow in every Acre five *London* Bushels, or four at the least: Some years it may so happen that there is no Seasonable weather before *March*, to plough the Barley-earth. The Husbandman as soon as he hath sowed his Pease and Beans, then let him cast his Barley-earth, and shortly after ridge it again, so that it be sown before *April*: And if the time of the year be past, then sow it upon the casting. There are three

kinds

kinds of Barleys, that is to say, Sprout Barley, long Ear, and Bear Barley: Sprout Barley hath most commonly a flat Ear, three quarters of an Inch broad, and three Inches long, the corners are very great and white, it is the best Barley. Long Ear, hath a flat Ear, half an Inch broad, and four Inches and more of length: But the Corn is not so great, nor so white, it will soon turn and grow to the Oats. Bear Barley or Big, should be soon sown upon dry ground; it hath an Ear four Inches long, or more, set four-square, like Peck wheat, it hath small Corns and little Flour, and that is the worst Barley, four *London* Bushels are sufficient for an Acre: And in some Countries they do not sow their Barley till *May*, and then most commonly upon Gravel or Sandy Ground: But that Barley generally is never so good as that which is sown in *March*. For if it be very dry weather after it is sown, that Corn that lieth above, lieth dry, and hath no moisture, and that little underneath cometh up, and when Rain falls, then that spreads that lieth above, and oftentimes it is green when the other is ripe, and when it is Threshed, there is much light Corn in it.

*To Sow Oats.*

IN *March* is the time to sow Oats, and especially upon light Ground and dry, howsoever they will grow on wetter Ground than any Corn else; for wet Ground is good for no manner of Corn. Three *London* bushels will sow an Acre. There are three sorts of Oats, that is to say, Red Oats, Black Oats, and Rough Oats. Red Oats are the best, when they are Threshed they will be Yellow in the

bushel; they are very good to make Oatmeal of. Black Oats are as great as they are, but they have not so much Flour in them, for they have a thicker Husk, nor do they make so good Oatmeal. The Rough Oats are the worst Oats, and it quitteth not the Cost to sow them. They are very light and have long Tails, whereby they will hang on the other. These several kinds of Oats wear the Ground very much, and make it as it were quick. A young Husbandman had need to be careful how thick he soweth all manner of Corn for two or three years, and to observe how it cometh up, whether it be thick enough or not; and if it be too thin, let him sow thicker the next year; but if it prove well, let him hold his hands for three or four years; but if it be thin, let him Recollect with himself, whether it proceeds from the unseasonableness of the Weather, or through his thin sowing.

*How to sever Pease, Beans, and Fitches.*

**W**Hen the Husbandman hath Threshed his Pease and Beans, after they be winnowed, if he Sow them or Set them, let them be well reed with Sieves, and let him sever in three parts the great from the small, by which means he shall get in every Quarter a *London* bushel, or thereabouts: For the small Corn lieth in the hollow and void places of the great Beans, and yet shall the great Beans be sold as dear. And therefore he that buyeth by whole-sale, and Retailleth, must needs be a great gainer; and he must needs be a loser that sets his Pease, Beans, and Fitches together, for then he loseth his whole-sale; but sever into three parts, there is the more gain,

*How*

*How all manner of Corn should be Covered.*

**T**He Corns being shorn and bound, and the Tythes cast out, it will be time to Cover them, Stock them, or half Throve them; but Covering is the best way of all manner of white Corn: And that is to set four sheaves on one side, and four sheaves on the other side, and two sheaves above, of the greatest, bound hard nigh to the nether end, the which must be set upwards, and the top downwards, spread abroad for to cover all the other sheaves. They will stand best in wind, and save themselves best in Rain; they should be set on the ridge of the Land, and the side-sheaves to lean together in the tops, and wide at the bottome, that the wind may go thorow to dry them. Pease and Beans should be set on the ridge of the Land, four sheaves together, the tops upwards, and writhen together, and wide beneath, that they may the better wither.

*To Load Corn, and Mow it.*

**W**Hen all the several Corns are dry and withered enough, then let the Husbandman load them into the Barn, and lay every several sort of Corn by itself: And if it be a wet Harvest, let him make many Mows; and if he have not housing enough, then it is better for him to lay the Pease and the Beans without upon a Reke, rather than any other Corn, and it will be better upon a Scaffold than on the Ground, but then it must be well hedged from Swine and other Cattel. Besides, the Ground will rot the bottom, where is the Scaffold saveth both

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hedging

hedging and rotting, but they must both be well covered, And the Husbandman may set Sheep or Cattel under the same Scaffold, for it will serve him instead of a House, if it be well and strongly made.

*How to know divers manner of Weeds.*

**I**N the latter end of *May*, and the beginning of *June*, is the time for the Husbandman to weed his Corn. There are divers manner of weeds, as Thistles, Kedlocks, Docks, Cockle, Drake, Darnel, Goldes, Haddods, Dog-fennel, Mathes, Tare, and divers other small weeds; but these already named, are those that are most troublesome. The Thistle is an ill weed, rough and sharp to handle, which fretteth away the Corns nigh it, and causeth the Shearers not to shear clean. Kedlocks have a leaf like Rapes, it beareth a yellow flower, and is an ill weed; it groweth in all manner of Corn, and hath small Cods, and groweth like Mustard-seed. Docks have a broad leaf, and divers high spires, and very small seed in the top. Cockle hath a long small leaf, and it will bear five or six flowers, purple colour, as broad as a Groat; the seed is round and black, and may well be suffered in Bread-corn, but not in feed, for therein is much flour. Drake is like Rye, till it begin to seed; it hath many seeds like to Fennel-seeds, and hangeth down-wards, and it may well be suffered in Bread, for there is much flour in the seed, and it is an Opinion, that it proceedeth from Rye. Darnel groweth up strait like to a high Grass; it hath long seeds on either side, there is much flour in the seed; it groweth much amongst Barley, and it is said to come from small Barley.

Barley. Guldes or Goldes hath a short jagged leaf that groweth half a yard high, it hath a yellow flower as broad as a Groat; it is an ill weed, that groweth most commonly amongst Barley and Pease. Haddod hath a blew flower, and a few little leaves, it hath five or six branches flowered in the top; it groweth commonly in the Rye upon lean Ground, it doth little hurt. Dog-fennel and Mathes, are both one, and in the coming up is like Fennel; it beareth many white flowers, with a yellow seed, and it is the worst weed that is, except Tare: It riseth most commonly when great wet falleth shortly after the Corn is sown. Tare is the worst weed, and it doth never appear till the Month of *June*, after a great wet, or a little before; it groweth most in Rye: It is somewhat like Fitches, but that it is much smaller; it will grow as high as the Corn, and with the weight thereof, pull it down flat to the earth, fretting the Ears of it away: Wherefore I have seen Husbandmen Mow down the Corn and it together; and also with sharp hooks to reap it, as they do Pease, and make it dry, and then it will be good Fodder. There are many other VVeeds which do much harm, which here for brevity sake I shall omit to mention.

*How to weed Corn.*

**T**He chief Instrument to weed Corn, is a pair of Tongs made of Wood, the further end of them being nicked to hold the weed the faster. After a shower of Rain it is best weeding, for then they may be pulled up by the roots, so as never for to grow again. If it be dry weather, then must the

the Weeder have a Hook with a Socket upon a little staff a yard long; and this Hook should be well steeled, and ground sharp both behind and before; and in his other hand he should have a forked stick about a yard long, and with his forked stick he must put the weed from him, and he putteth the Hook beyond the root of the weed, and he pulleth it to him, and cutteth the weed close to the Earth, and with his Hook he taketh up the weed, and casteth it in the Rain, and if the Rain be full of Corn, it is better to stand still when it is cut and withered; but let him beware that he do not tread too much upon the Corn, and especially after that it be shot, and when that he cutteth the weed, that he cutteth not the Corn; and therefore the Hook should not exceed to be above an Inch wide. And when the weed is so short, that he cannot with his forked stick put it from him, and with the Hook put it to him, then must he set his Hook upon the weed close to the Earth, and put it from him, and so he shall cut it clean. With these two Instruments, he shall never need to stoop to his work. Dog-fennel, Goldes, Mathes, and Kedlocks, are bad to weed after this manner, they grow upon so many branches, and are so close to the Earth, and therefore they use for the most part to pull them up with their hands: But let them look well, that they pull not up the Corn there-withal. As for Tare, no weeding will serve turn.

*How to Mow and Shear Barley and Oats.*

**B**arley and Oats most commonly are Mown, a Man or a Woman following the Mower with a Hand-rake half a yard long, with seven or eight teeth,

teeth, in the left hand, and a Sickle in the right hand; with the Rake he gathereth as much as will make a sheaf: And then he raketh the Barley or Oats by the tops, and pulleth out as much as will make a band, and casteth the band from him on the Land, and with his Rake and his Sickle taketh up the Barley or Oats, and layeth them upon the band, and so the Barley lieth unbound three or four days until it be dry weather, and then he binds it. And when that the Barley is led away, the Land must be raked, or else there will be much Corn lost, and if the Barley or Oats lie, they must needs be shorn.

*To Reap or Mow Pease or Beans.*

**P**ease or Beans are Reaped most commonly last, or else Mown after divers manners; some with Sickles, some with Hooks, and some with Staff-hooks. In some places, they lay them on Reaps, and when that they are dry, they lay them together on heaps like Hay-cocks, and never bind them; but the best way is when the Reaps be dry to bind them, and to set them on the ridge of the Lands, three sheaves together. Mowers geld not your Beans, that is to say, to cut the Beans so high, that the nether Cod grow still on the stalk, and when they are bound, they are the readier to Load and Unload, to make a Reke, or to take from the Mow to Thresh, and so are not the Reaps.

*How Rye should be Shorn.*

**A**T the latter end of July, or the beginning of August, is the time to Shear Rye, which should



should be shorn clean, and fast bound. In some places they Mow it, the which is not so profitable a way for the Husbandman, but it is the sooner done. For when it is Mown it will not be so fast bound, and the Husbandman cannot gather it up so clean, but there will be much lost; it also taketh up more room in the Barn than shorn Corn doth: Nor will it keep or save it self from Rain or ill weather, when it standeth in the Cover, as the shorn Corn will do.

*How to Shear Wheat.*

**W**Heat should be shorn clean, and bound hard; but for a general Rule, let the Shearer take heed, that the Shearers of all manner of wheat-Corn, cast not up their hands hastily, for then all the loose Corns, and the Straws that he holdeth not in his hand, flieth over his head, and are lost; and also it will pull off the Ears, and that more especially of the Corns that are very ripe. In some places they will shear their Corns high, to the intent to Mow their stubble, either to Thatch or to burn; if they so do, they have great cause to take good heed of the Shearers: For if the Ears of the Corn crook down, or bend to the Earth, if the Shearer be not very wary, and put up the Ear, or he cut the straw, as many Ears as be under his Hook or Sickle, fall on the Earth, and are lost: And when they Mow the stubble, it is a great hindrance to the profit of the Ground. In *Somerſet-shire*, about *Zelcheſter*, or *Martock*, they shear their Wheat very low, and all the Wheat-straw that they purpose to make Thatch of, they do not Thresh it, but Cut off the Ears,

Ears, and bind it in sheaves, and call it Reed, and there-with they Thatch their Houses. And if it be a new House, they thatch it under their foot, the which is the best and surest Thatching that can be of straw; for Crows, Pidgeons, and the like, shall never be able to hurt it.

*How to Sow both Pease and Beans.*

**L**Et the Husbandman Sow his Pease upon clayie Ground, and the Beans upon the Barley ground, for they require ranker ground than the Pease. Howsoever some Husbandmen are of Opinion, that the big and stiff Ground, as Clay, should be sown with big VVare, as Beans, But I am of another mind; for if a dry Summer come, his Beans will fall short. And if the Ground be very good, put the more Beans to the Pease; and they will yield the better, when they are Threshed. And if it be very rank Ground, as it is much at every Town side, where Cattel do resort, then Plough not the Land, until it be sown: For if he do, there will come up Kedlocks and other weeds. But let him sow it with Beans; for if he sow it with Pease, the Kedlocks will hurt them. And when he finds a seasonable time, let him sow both Pease and Beans, so that they are sown in the beginning of *March*. To know a seasonable time to sow, go upon the Land that is ploughed, and if it sing or cry, or make any noise under thy feet, then 'tis too wet to sow; but if it make no noise, and will bear the Horses, then sow in the Name of God. For the manner of his sowing, let him put the Pease into the Hopper, and cast a broad thong of Leather or Garth-web, of an Ell long;



long; let him fasten it to both the ends of the Hopper, and put it over his head like a Belt, and stand in the midst of the Land where the Sack lieth, the which is most conveniently for the filling of the Hopper, and let him set his left foot before, and take a handful of Pease. And when he hath taken up his right foot, then let him cast the Pease from him all abroad, and when his left foot riseth, let him take another handful, and when his right foot, then cast them from him, and so at every two paces, he shall sow a handful of Pease: Let his foot and his hand agree, and then he shall be sure for to sow even, In his casting, he must open as well his fingers as his hand: And the higher and the further that he cast his Corn, the better shall it spread, except it be a great wind. And if the Land be very good, and will break small in the ploughing, it is better to Sow, and after the Plough than to delay and lose time.

*To make a Ditch.*

**I**F the Husbandman will make his Ditch four foot broad, then it should be two foot and a half deep: And if it be five foot broad, then it must be three foot deep, and so accordingly; and if it but five foot broad, then it must be double set, and the rather it should be fenced, and the lower Hedge will serve.

*To get Sets, and set them.*

**I**F the Husbandman have Pastures, he cannot want for Quick-setting, Ditching, or Plashing: When it is green, and cometh to be of age, let him get his Quick-sets out of some VVoody parts, and let

let them be of white Thorn and Crab-tree, for they are best: Holly and Hasel are good. If he dwells in the plain Country, then he may get both Ash, Oak, and Elm, for those will increase much Wood in a short space. Let him set Oak-sets and Ash, ten or twelve foot asunder, and cut them as he doth his other Sets, and cover them over a little with Thorns, that Sheep and other Cattel eat them not. And also weed them clean in the *Midsummer* Moon, or soon after, for the VVeeds, if they overgrow, will kill the Sets. But get no black Thorn for this use, for it will grow outward into the Pasture, and do much hurt to the Grasse, besides the tearing of the VVooll off the Sheep. It is a good time to set Quick-sets, from the time the Leaves are fallen, until our *Lady-day* in *Lent*. The Husbandmans sandy or gravelly Ground should be first set, for it will soon dry, and then the Quick-set will take no root, except it meet with great wet; for the Moulds will tie it, if it be Ditched in *February* or *March*, and likewise Clayie Ground, &c. Let the Husbandman make his Sets long enough, that may be set deep enough in the Earth, for then they will grow the better: Let them stand half a foot and more above the Earth, that they may spring out of many branches; and then let him take a Line and set it where he will have his Hedge, and let him make a Trench after his Line, and pare away the Grasse, there let the Quick-sets be set, and let him cast it by Line, where the Earth of the Ditch shall lie, and dig up the Moulds, and spade graff deep, and put in the Sets, and dig up more Mould and lay upon that Set, and so to go through with it till he have set up his Sets, and let them lean towards the Ditch, and a foot

long; let him fasten it to both the ends of the Hopper, and put it over his head like a Belt, and stand in the midst of the Land where the Sack lieth, the which is most conveniently for the filling of the Hopper, and let him set his left foot before, and take a handful of Pease. And when he hath taken up his right foot, then let him cast the Pease from him all abroad, and when his left foot riseth, let him take another handful, and when his right foot, then cast them from him, and so at every two paces, he shall sow a handful of Pease: Let his foot and his hand agree, and then he shall be sure for to sow even, In his casting, he must open as well his fingers as his hand: And the higher and the further that he cast his Corn, the better shall it spread, except it be a great wind. And if the Land be very good, and will break small in the ploughing, it is better to Sow, and after the Plough than to delay and lose time.

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foot

foot from that, let him make his Ditch; for if he make it too nigh his Sets, the water may happen to cause the Sets to fall down.

*To make a Hedge.*

**T**HE Husbandman must get his stakes of heart of Oak, for those are best; Crab-tree, black Thorn, and Elder are good. Red Weathy is best in Moorish Ground; Ash, Maple, Hasel, and white Thorn will do well for a time. Let him set his stakes within two Foot and a half together, except that he have very good hedging, and lodge to bind with. And if it be double eddered, it is much the better, and of greater strength to the Hedge, and it will last much the longer; let him lay his small Trousse or Thorns that he hedgeth withal, over the Quick-sets, that Sheep do not eat his Spring or Buds of the Sets; let his stakes be well driven that the point take the hard Earth, and when that he hath made his Hedge, and eddered it well, then let him take his Mall again, and drive down the eddering, and also his stakes immediately: For with the winding of Edderings, he shall loose his stakes, and therefore they must needs be driven new, and hardned, and that stake shall be driven the better when it is well bound.

*To Plash or Plethe a Hedge.*

**I**F the Hedge be ten or twelve years growing since it was first set, then let the Husbandman take a sharp Hatchet or Hand-bill, and cut the Sets in a plain place, close unto the Earth, the more half asunder, and bend it downwards towards the Earth, and

wrap and winde them together; but always let him be sure that the top lie higher than the Root a good quantity, for else the sap will not run into the top kindly, but in process of time the top will die; and then let him set a little Hedge on the back-side, and it shall need no more mending for many years after; and if the hedge be of 20, 24, 30. years of age since it was first set, then let him winde it at the nethermost boughs, and winde them together, and then cut the Sets in a plain place a little from the Earth, the more half asunder, and let him suffer it to hang downwards rather than upwards, and that for divers causes; then let him winde the boughs and branches thereof into the Hedge, and at every two foot, or three foot to leave one Set growing not plethed. Let the tops be growing of five foot high, or thereabouts, to stand as a stake, if there be any such, or else to set another, and to winde another that is plethed about them: And if the boughs will not lie plain in the Hedge, then cut it more than half asunder, and bind it unto the Hedge, then shall not the Husbandman need for to mend that Hedge but in few places, twenty years after or more: And if the Hedge be old, and be great Stubs or Trees, and they in the bottom, that Beasts may go under or between the Trees, let him take a sharp Ax, and cut the Trees or Stubs that grow a foot from the Earth, or thereabouts, in a plain place, within an Inch or two Inches of the side: And let him again shave downwards, and let the top of one Tree lie over the root of another Tree, to the plethe down the boughs of the same Tree to stop the hollow places. And if the hollow and void places will not be filled and stopped, then let him scour the old Ditch,

and cast it up new, and fill with earth all the void places; and if so be these Trees will not reach in every place to make a further defence, then let him double Quick-set it, and Ditch it new in every place that is needful, and set a Hedge thereupon, and let him over-lay the Sets, to keep the Sheep and Cattel from eating them.

*To mend a High-way.*

**F**irst and principally, let the Husbandman look that there be no water standing in the High-way, but that it be always current and running, nor that it have no more a stop in one place than in another. And in Summer when the water is dried up, then to get Gravel, and to fill up every low place, and to make the even somewhat descending, or Current one way or other; and if there be no Gravel or Stones to get, yet fill it up with Earth in the beginning of Summer, that it may be well hardned with carriage and treading upon, and it will be well mended, if the water may pass from it: The which should be well considered of, and that more especially about *London*, whereas they are at much more cost than needs. For there they Ditch High-ways on both sides, and fill up the hollow and low place with earth, and then they cast and lay Gravel aloft: And when a great Rain or water cometh, and sinketh through the Gravel, and sinketh into the Earth, the Earth swelleth and waxeth soft, and with treading, and especially with carriage, the Gravel sinketh and falleth downwards, as its nature and kind requireth, and then it is in a manner as a Quick-sand, that is difficult for any thing to go over it. But if he

would

would make more Ditches in Summer time, when the water is dried up, and the Workman may see all the hollow and low places, and then to carry Gravel, and fill it up as high as the other Knoles are, then would it not swell or be turned into a Quick-sand, and every Traveller might go besides the High-way with his Carriage at his pleasure: If this course were followed, it would be both good and necessary for that purpose.

*How Forks and Rakes should be made.*

**T**He good Husbandman hath his Forks and his Rakes in a readiness the Winter before, and they should be got betwixt *Michaelmas*, and *Martlemas*, beyked, and set even to be upright in his hand, that they may be hard, stiff, and dry. And when that the Husbandman sitteth by the Fire, and hath nothing to do, then may he make them ready, and teeth the Rakes with dry wethy wood, and bore the holes with his Wimble both above and under, and drive the teeth upward fast, and hard, and afterwards wedge them about with dry wood of Oak, for that is hard, and will dry, and never come out. And if the Husbandman get them in Sap-time, all the baking and drying that can be shall not make them hard and stiff, but they will always be plying; for they are most commonly made of Hasel and Wethy, and those are the first Trees that bloom, and especially Hasel; for it beginneth to bloom as soon as the Leaf is fallen: And if the Rake be made of green wood, the head will not abide upon the steel, and the teeth will fall out when the Husbandman hath most use of them, to the hindrance

of his work, and the loss of his Hay. Let him be sure that his Rake and his Fork are upright in his hand; for if one end of the Rake, or the side of the Fork hangs downwards, they will neither be handsome, nor easie to work withal.

*How to Mow Grasse.*

**A**T the latter end of *June*, it will be time for the Husbandman to begin to Mow his Meadows, for then they will be well grown: But howsoever they are grown, in *July* they must be Mown; for divers causes: One is, that it is not convenient to have Hay and Corn both at work at one time. Another is, that the younger and greener the Grasse is, the softer and the sweeter it will be when it is Hay, but it will require the more withering; and the elder the Grasse is, the harder and drier it is; and the harder and drier it is, the worse it is for all manner of Cattel; for the seeds will be fallen, which are in a manner a kind of Provender, and it will be the harder to eat and chew. And another cause is, that if dry weather come, it will dry and burn upon the Ground, and waste it self away. Let the Husbandman have a care that his Mower Mow clean, and hold down the hinder hand of his Sithe, that he do not indent the Grasse, and Mow his Swath clean thorough to that that was last Mown before, that he leave not a man between, and especially in the common Meadow; but in the several Meadow it maketh the less charge, and that the mouldy Warp-hills be spread, and the sticks clean picked out of the Meadow in *April*, or the beginning of *May*.

*To Redde and make Hay.*

**W**HEN the Meadows are Mowed, then they should be Redded, and laid upon the even ground; and if the Grasse be very thick, it should be shaken with hands, or with a short Pitch-fork; for good Redding is the chief point to make good Hay, for then it shall be withered all alike, or else not: And when it is well withered on the over-side and dry, then let the Husbandman turn it clean before Noon, as soon as the Dew is gone. And if he dare trust the weather, then let him let it lie so all night, and on the next day let him turn it again before Noon, and towards the Night make it windrows, and then in small Haycocks, and so to stand one Night at the least and sweat, and the next fair day cast it abroad again, and turn it once or twice, and then make it into greater Haycocks: And to stand so one Night or more, that it may unjoyn and sweat; for if it sweat not in the Haycocks, it will sweat in the Mow, and then it will be dusty, and not wholesome for the Cattel. And when it standeth in the Cocks, it is better for to Load, and more Hay may be Loaded at a Loading, and the faster it will lie; which Hay cometh of a Grasse called Crow-foot, and groweth flat above the Earth, and beareth a yellow flower half a yard high and more; and hath many knots towards the Coat, and it is the best Hay for Horses and Beasts, but it requires much more withering than any other Hay, or else it will bepiss it self, and wax hot, and afterwards dusty. For to know when it is withered enough, make a little Rope of the same, that you think should be

most green, and twine it as hard together between your hands as you can, and so being hard twined, let one take a sharp Knife, and cut it close by your hand, and the knots will be moist, if it be not dry enough. Short Hay and Ley-Hay are good for Sheep and other Cattel.

*To remove and set Trees.*

**I**F the Husbandman will remove and set Trees, let him get as many Roots with them as he can, let him be careful that he neither break nor bruise them, If there be any Root broken or much bruised, let him cut it off hard by the Root, as it is bruised with a sharp Hatchet, otherwise the Root will die. And if it be Ash, Elm, or Oak, let him cut off all the boughs clean, and save the top whole. For if he make himself rich of Boughs, he makes himself poor of Thrift, for two causes. The Boughs cause them to shake with Wind, and to loose the Roots; also he cannot get them so cleanly, but that some of the Roots must needs be cut, and then there will not come so much sap and moisture to the Boughs, as there did before: And if the Tree be long, cut off the top two or three yards. And if it be an Apple-tree, or a Pear-tree, or such other as beareth Fruit, then let him cut away all the Water-boughs, and the small Boughs, that the Principle of them may have the more sap; and if he make a mark which side of the Tree stands towards the Sun, he may set it so again, which is so much the better.

*How*

*How to set Trees without Roots, and yet for them to grow.*

**T**HERE are Trees that will spring Roots themselves, and those are certain Apple-trees that have knots in the Boughs or Cassettes, or Wides, and such other that will grow on flavelings; and likewise Poplars and Wethies, they must be cut clean, and besides the Tree that they grow on, and the top cut clean off, eight or ten foot in length, and all the Boughs between, and be set a foot deep or more in the Earth in good Ground: There are four manner of Wethies, that is to say, white Wethy, Black, Red, and Osiered Wethy. White VVethy will grow on dry Ground, if be set in the beginning of VVinter, and will not grow on Moorish ground. Black VVethy will grow better on Moorish than on dry ground; and Red VVethy in like manner. Osiered VVethy will grow best in watry and moist Ground: And they are Trees that will soon be nourished, and they will bear much wood, and they should be Cropped every seven or eight years, or else they will die, but they must not be Cropped in Sap-time- nor no Trees else. In many places both the Lords, Free-holders, and Tenants will set such VVethies and Poplars in Moorish Grounds for to increase VVood.

*Necessary things belonging to Grafting.*

**I**T is no less necessary than profitable and pleasant for a Husbandman to be furnished with most sorts of Fruit, and therefore it will be convenient for him

him to know how to Graft. Therefore he is to be acquainted with what things he must have to Graft withal. He must have a Grafting-Saw, the which should be very thin and thick Toothed; because it is thin, it will cut the narrower Kirt, and the clearer from bruising the Bark. And therefore it is set in a Coppice piece of Iron, six Inches, for to make it stiff and big. He must also have a Grafting-knife of an Inch broad, with a thick back to cleave the stocks withal. And also a Mallet to drive his Knife and his Wedge into the Tree, and a sharp Knife to pare the Stock-head; and another sharp Knife to cut the Graft clean. And also he must have two Wedges of hard Wood or Iron; a long small one for a small stock, and a broader for a bigger stock, to open the stock when it is cloven and pared; and also good tough Clay and Moss and Bastes, and peeling of VVethy or Elm for to bind them with.

*How to Graft.*

**H**E must get Grafts of the fairest Lances he can find on the Tree, and let him be sure that it have a good knot or joynt, and an even; then let him take his Saw, and saw into his Crab-tree in a fair plain place, pare it even with his Knife, and then let him cleave the stock with a great Knife and his Mallet, and set in a VVedge, and open the stock according to the thickness of his Graft; then let him take his small sharp Knife, and cut the Graft on both sides in the Joynt, but let him not pass the midst thereof; and let the inner side that shall be set into the stock, be a little thinner than the outward

ward-side, then let him proffer his Graft into the stock, till that they close so clean, that they cannot put the edge of his Knife on the other side betwixt the stock and the Graft, and let him set them so that the Tops of the Graft bend a little outward, and let him look that the wood of the Graft be set fit with the wood of the stock; and therefore he may not let the Barks meet in the inward-side: Then let him pull away his VVedge, and it will stand much faster. Let him afterwards take tough Clay like Marle, and lay it upon the stock-head, and with his finger lay it close to the Graft, and a little under the head, to keep it moist, and that no wind come into the head at the cleaving; then let him take Moss, and lay thereupon for chinning of the Clay, and take a baist of white VVethy or Elm, or half a Brere, and bind the Moss, the Clay, and the Graft together; but let him be very careful that he break not the Graft, neither in the cleaving nor in the binding; and he must set something by the Graft, that Crows, and such ravenous and unruly Birds do not light upon the Graft; for if they do, they will quickly break them.

*What should be first Grafted.*

**P**Ears and VVardens should be grafted before any manner of Apples, because the Sap cometh sooner and rather into the Pear and VVarden, than into the Apple-tree; and after St. Valentines Day, it is time to Graft both Pears and Wardens till March be come, and then to Graft Apples to our Lady.



*Lady-day*; and then let him Graft that he hath got of an old Apple-tree first, for that will bud before the Graft got of a young Apple-tree lately Grafted, and a Pear or Warden should be Grafted in a Pear-stock: And if he have got none, then let him Graft it in a Crab-tree-stock, and it will do well. Some men Graft them in white Thorn, and then it will be the harder, and more stony. For all manner of Apples, the Crab-tree-stock is best.

*How to Graft betwixt the Bark and the Tree.*

**T**HERE is another manner of Grafting, and sooner done, and of sooner growth, but it stands in great danger of the Wind when it begins to grow. Therefore the Husbandman must spare his stock, and shave the Head thereof as he did before, but let him not cleave it; then let him take his Graft, and cut it on the Joynt to the middle, and make the Tenaunt thereof half an Inch long, and a little more, all of one side, and part the Bark away a little at the point on the other side; then he must have made ready a Punch of hard wood with a Slope and a Tenaunt on the other side like to the Tenaunt on the Graft: Then let him put the Tenaunt of the Punch betwixt the Bark and the Wood of the Stock, and pull it out again, and put it in the Graft, and let him be sure that it joyn close, or else let him mend it. And this course so taken, cannot fail; for then the Sap will rise on every side, and it will spring so fast, that if it stand on plain Ground, the Wind may possibly blow it besides the Head, for it hath no Fixation in the Wood. And this is the best remedy for the blowing off, to cut or crop away some of the

the nethermost leaves as they grow, and this is the best way to Graft; and especially a great Tree: And then let him Clay it, and bind it as he did the other.

*To Nourish all manner of Stone-Fruits, and Nuts.*

**A**S for Cherries, Damsons, Bullas, Plumbs, and the like, they may be set on the Stones, and also of the Siens growing about the Tree of the same, for they will soonest bear. Filberts and Walnuts may be set on the Nuts in the Garden, and afterwards removed and set where he will. But when they are removed, they should be set upon as good Ground or better, or else they will not like.

*To Fell Timber.*

**I**F the Husbandman have Wood to Fell, I advise him for to Retail it himself, that he may have an eye to his Market; and if not, if he have a Bailly or some other discreet Servant, to do it for him; and if it be small Wood, to Kidd it, and Sell it by the Hundreds, or by the Thousands; and if there be Ashes in it, to sell the small Ashes to Coopers for Garches, and the great Ashes to Wheel-rights, and the more mean and ordinary Trees to Plough rights, the Crab-Trees to Millers, to make Coggs and Tongs. And if there be any Oaks, either great or small, to Fell them, and Peel them, and sell the Bark by it self, and afterwards to sell the Trees, the Poles by themselves, the riddle sort by themselves, and the greatest by themselves, and then to sell them by Scores and Half-scores, or Hundreds, as he can,



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can, and to fell it hard by the earth; for one Foot next to the Earth, is worth two foot on the Top. Let him cut his Timber long enough, that he may leave none on the top; and let them fell the tops as they are, at the great, or else dress them, and fell the great Wood by it self, and the Kid-wood by it self, and to Fell the under-wood first, at any time between *Martlemas* and *Holy-rood Day*. And all the Ashes between *Martlemas* and *Candlemas*; and all Oaks as soon as they will peel, until *May* be done, and not after.

*To Fell Wood for the Houſe, or to Sell.*

**I**F the Husbandman have any Woods to Fell, for his Household to Burn or Sell, then let him Fell the under-wood Sire in Winter, that his Cattel and Beasts may feed and brouse the Tops, and let him Fell no more on a day than the Beasts will eat the same day or on the morrow after. And as soon as it is well eaten and broused, then let him Kid them, and set them on their ends, and that will save the bands from Rotting, and they will be the lighter to carry, and they will burn the better, and lie in less room. And when that he shall bring them home to make a stack of them, let him set the nethermost course upon the ends, and the second course flat upon the sides and the ends, the sides and the ends outward, and for the third course, let him fall on the side overthwart the other, and so to go them over, until that he have laid all up. And when that he shall have occasion for to burn them, to take the uppermost first.

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*To keep Spring-Wood.*

**I**N the Winter before the Husbandman will Fell his Wood, let him make a good sure Hedge, that no matter of Cattel may get in. And immediately after it is fallen, let it be carried away before the Spring rise up; for else the Cattel that carry the wood, will devour the Spring, and when the top is eaten or broken, it is a great hindrance to the growth and goodness of the Spring; for there where it is eaten, bud and issue out many Branches, and that not so far as the first would have been. A Park is best kept when there is neither Man, Dog, nor Four-footed Beast therein, except Deer. And so a Spring is best kept, when there is neither Man nor Four-footed Beast within the Hedge: but if there be much grass, and the Husbandman is unwilling to lose it, then let him put in Calves newly weaned, and take from their Dams, and also weaning Colts, and Horses not past a year of Age. Let him take his Calves away at *May*, the Colts may go longer for their eating of any wood, but its dangerous both for the Calves, Foals, and Colts for Ticks, or for being Louſie, the which will kill them, if they be not well looked to. In seven years it will requite the greatest part of the cost, but at ten years it is at the best, and then the under-boughs should be cut away, and made Kid of, and the other will grow much the better and faster: But if the under-boughs are not cut away, they will die, and then they are lost, and will prove very hurtful to the Spring; for they will take away the sap that should make the Spring to grow the better.

How

*How to Shred, Lop, and Crop Trees.*

**I**F the Husbandman hath any Trees to Shred, Lop, or Crop, for his Fire-wood, let him Crop them in VVinter (as hath been said) that the Beasts may eat the brouse and the Moss of the boughs. And also the Yves, and when that they are broused and eaten, let him dress the VVood, bow it clean, and cut at every height, and rear the great VVood to the top, and Kid the small boughs, and set them an end; and if he shall not have sufficient wood, except that he head the Trees; and cut of the Tops, then let him head them three or four foot above any Timber: And if it be no Timber, but a shaken Tree, or a hedg-root full of knots; then let him head it thirty foot high, or twenty at the least; for so far it will bear plenty of wood and boughs, and much more than if it were not headed. For a Tree hath a property to grow to a certain height, and when it arriveth to that height, it is at a stand, and groweth no higher; but in breadth and in conclusion, the top will die, or decrease, and the body thrive; and if a Tree be headed, and used to be Cropped and Lopped at every twelve or sixteen years end, or thereabouts, it will bear much more wood in process of time, than if it were not Cropped, and be more profitable to the Owner.

It is the common custome with some to begin at the top of the Tree when it is to be Shred or Cropped, because each bough should lie upon the other, when that they shall fall, so that the weight of the boughs shall cause them to be the rather cut down; but that is not the best way, for that causeth the  
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bough to shave down the nether part, and pulleth away the bark from the body of the Tree, the which for the future, will cause the Tree to be hollow in that place, to the hurt of it. And therefore let the Husbandman begin at the nethermost bough first, with a light Ax for a hand to cut the bough, or both sides a foot, or two foot from the body of the Tree, and especially to cut it more in the nether side, than the upper side, so that the bough fall not streight down, but fall on the side, and then shall it not slave nor break any bark, and every bough will have a new Head, and bear much more wood; and let the Husbandman, except he must needs do it, avoid to Crop the Tree, and that more especially when the VVind standeth in the North or in the East; and let him beware that he Crop it not in Sap-time, for then it will dry within few days after, though it were an Oak.

*Particular Secrets, and Choise Rules for Setting, Watering, and Ordering of several choise Plants, Roots, Delectable Flowers and Herbs for Gardens. The ordering of the Summer-Garden for Pleasure and Delight, as also for the more profitable Increase of the Kitchen-Garden: Together with Directions how to Sow, and Order for the Season, whatsoever belongeth to the Summer or Kitchen-Gardens, for Plants, Herbs, Roots, Seeds, &c. As also for the Aptest time to Gather, Dry, and Preserve them.*

**T**He Husbandman or Gardiner, who would have Plants to grow to a greater bigness than ordinary, ought to remove them after four or five Leaves are come up, and to set them again, as out of one bed bestowed into another, and the like from one border into another, prepared at a certain distance asunder, when showers of Rain have well moistened and softened the same, being such Plants that (before the setting) require to have tops of the Leaves, and ends of the Roots cut off, whereby they may the freelier grow broad or big in the Roots.

The young sets in the Garden (of pleasant delight and smell) may the Owner of the Garden also bestow in Borders in all seasons (although more commendably in the Spring time) in breaking of the

slips

slips or branches of one years growth, for the bodies of the old stock, and in wreathing the ends about so to set them a good depth in the Earth, the Moon at that time drawing near to the Change, which will much further the Sets in their sooner taking of Root.

The Marigold, Daisie, Columbines, Primrose, Cowslip, Sweet John, Gilliflowers, Carnations, Pinks, and sundry other delectable Flowers; if the Gardiner do change those into Beds, they will increase the bigger, fairer, and doubler, the Moon at this time being considered to be increased of Light, there must be a diligence to be bestowed in the often watering of them.

The Plants (which are certain Leaves sprung up) need not to be removed into other Beds, are Spinage, Arach, Dill, Sperage, Sorrel, Chervil, Parsley, and divers others of the like sort.

The Gardiner having Digged and Prepared his Garden into Beds and Borders, I will now shew him, as briefly as I can, the best order and manner for Setting and Sowing of the chiefest Plants, Herbs, Flowers that are now most in request.

When he sets any Herbs, Flowers, or Plants, he must the next day a little moisten the Ground in the morning, and so keep it moist until they be well Rooted by watering.

The best watering which is certain (except his Ground be new made with half Dung) is to make a hole with the Dibble, a little for the Herb or Plant aslope to the Root, and so to water the Root under the Ground; for water rotteth and killeth above Ground, and whatsoever he sows, let him cover it with Earth, but as thin as he can; for if they be

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too deep set or sown, most Seeds, Kirnells, and such like, will never come up.

When he sets any thing, let him be sure to make the Earth very wet, then let him overlay half a foot on dry Mould, making it so close (with beating it with the Spade) as he can, then let him set in his Herbs or Plants, thrusting the Earth very hard to the Root.

Herbs for Works may be watered; but Plants must not be wet above ground, for fear of rotting.

Let him never water but in the morning, except in *June* or *July*, and then he may water about four of the Clock in the Afternoon.

For Setting, Sowing, or Planting, it is best when the weather is warm, nor the ground neither too wet nor too dry at the top, but so moist as that it will not stick to his shoe, as after a frost. And for the time of the Moon, I hold the second day before the new Moon to be the best for most things but for Flowers, and that a little after the Change or New Moon.

The Ground which is to Sow at the Spring, must be Digg'd at *Michaelmas*, with good Dung, and then let him Trench the Digging.

The best time for Sowing is *February*, *March*, *April*; but for the Setting of Herbs, *March*, and the beginning of *April* is best: And those Herbs which spring out of the Ground in *February*, must be set in the Month.

In the middle of *April*, or in the beginning of *May* (as the Moon shall happen to be in the Wane) let him digg a Ditch about a yard deep, and lay some three quarters of a Load of Horse-dung therein, then let him cover the Dung over a foot thick with

with good Earth, laying his Seeds along on the Earth dry, and let him cover them an Inch thick with light Earth, and every night (until *May* be past) let him cover them with a wet cloth or straw, to keep away the Frost, and uncover them in the day time: And let him take notice, that when the Cucumber hath three leaves, he may then remove them to their other places. The Pompion-seeds should be set a finger deeper in the Earth; and the Cabbages should be removed when they are a hand full high.

Paraspe-seeds may be sown in *October* (in the Wane of the Moon) but if they prove not, let him sow more seeds in *February* following.

Carrots should be sown at the latter end of *April*, or the beginning of *May*.

Turneps grow best in sandy earth, and should be sown at that time that Carrots are: But if they are required in *Lent*, let him sow them in *August*, at the Wane of the Moon.

Onions require a rank fat Ground, half Dung, he must sow them in *February*: He may also sow Onion and Lettice-seeds, and Radish-seeds mingled together in one plot for Sallets, at the same time in a hot Ground: Let him set Onions for Scallions to seed in *October*.

Garlick requireth a temperate Ground, not too rank; and it is good setting of it in *February*, and in *October*.

Leeks are for a rank Ground, and should be sown in *October*.

Radishes require such a ground as the Onion doth; sow it in *February*, and it will last all the Summer, every Month before Woodseer, in the wane of the

Moon for fear of seeding; and he shall always have them fresh and young: But after Woodseer he may sow them at any time of the Moon.

Skerrots must be set in the wane, about the latter end of *September*, or beginning of *October*. For the most part all Roots should be sown in the wane of the Moon.

Lettice sown in *August*, will live all winter; but if they are sown in *March*, they will be so bitter that they cannot be eaten.

Parsley should be sown after the beginning of *August*, it will be fresh in the spring all the year; it loveth the shade: The seeds of Parsley and Marjoram will lie six weeks in the Ground before they come up.

Hop may be sown in seeds in *April*, but they will not last: The Roots that are young are good to set, but the slips are best.

Marygolds may be sown in *August* for the Spring; he may remove the Plants above two inches long, and they will grow the bigger.

Alexander is sown in *March* or *April*; he may remove the Roots, and they will grow the next year.

Borage and Bugloss, are sowed in the Spring, and die that year.

Succory, or Endive are sown in *March* or *April*, remove them before the spindle, and they will be the better.

Pennyroyal, the Roots parted, or the branches set in the ground, will grow.

Mints, either the Roots set or the branches being cut in divers places, and set in the earth, being wet, will thrive.

Savory

Savory sowed in the Spring commonly dyeth: but being removed, it will live in Winter.

Time is sown or set in the Spring, both the seeds, slips, and roots of it will grow: keep it from seeding, and it will last three or four years.

Tansie may be sowed in *March* or *April*; the Roots being removed, will prosper.

Bloodwort may be sowed in the Spring; its Roots being new set will last long.

Dandelyon may be sowed in *March* or *April*, and may be ordered as the former.

Cardus-Benedictus must be sowed in the Spring, for it will dye in the Winter.

Wormwood is best to be set in the slips; it will last three or four years.

Clary is sown in the Spring; it seeds the second year and then dyes.

Fennel may be sown in the spring and Fall; he may set the Roots, and it will continue many years.

Sweet Marjoram may be sown in *April*, but it will dye in the Winter; but if it be set, the slips will prosper.

Artichokes proceed of young Plants taken from the old stock: The best time to plant them is in *March* or *April*, two dayes before the full of the Moon (yet some plant them in *August*) let him set no Plants, if he may have choice, but those that have the bottom knobs whole, neither let him pluck any Plant from the stock, till it be strong; and if the bottom-knobs are pulled off and broken, it will hardly grow: And when that he would take the Plants from the stock, let him dig the Earth half a foot deep round about the stock, then let him thrust his

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Thumbs

Thumbs betwixt the stock and the Plant, keeping the bottom whole and unbroken, &c.

Pease and Beans for the Garden must have the seed changed every year; if not, the increase will be very small, and grow less and less; for in three years the great Rounseval and great Bean will be no bigger than the wild ones, let him do what he can to his Ground, if he set or sow them which grew there before; and so likewise it is with Corn, if the seed be not changed.

If his Pease be in *February*, let him set them an inch and an half deep; but if he sow them in *March* or *April*. let him set them but an inch deep, but let him be sure that he set them in the Wane of the Moon, some six or seven dayes before the change, or else he will have a great Cod, and but small Pease; and let him set them down eight inches asunder, and he shall have Pease long, and have them often: Let him set them in several plats, some in *February*, some in *March*, and others in *April*: A Quart of Pease will serve to set a good plat of Ground. Pease and Beans will prosper well, being set under Trees; and being sown in temperate wet weather, it will be a month or longer, before they will appear.

We shall now proceed to give other expert and certain Rules for sowing, planting, and setting of the most delectable Flowers and Herbs in use, for the adorning of a Summer-Garden, or a Garden of pleasure and delight.

Roses are of several sorts and colours, as White, Red, Damask, Province, Musk, and sweet-Bryar, &c. Of all the flowers in the Garden, this is the chief for beauty and sweetness: Rose-Trees are commonly planted in a plat by themselves

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(if the Gardiners have room enough) leaving a pretty space between them for gathering. Now for him to get and set his Plants, he must do thus: In the latter end of *January*, *February*, or the beginning of *March* (at the increase of the Moon) go to some old Rose-trees (but not too old) and the Gardiner shall find long young suckers or branches, which sprang up from the Root of the Tree the last year, let him dig the hole deep, that he may cut off those suckers close to the Root (but let him take heed of wounding the tree) then let him fill up the hole again with earth very close & hard, these suckers must be young Plants for young Trees: If the suckers have too many branches, let him cut them away, also the tops of them, they will take Root the better: Then where he intends to set them, let him dig holes in good ground, at the least a foot deep, and set them a good depth, treading in the Earth hard about them having a little Trench near them for watering, till they have taken Root. The Provost Roses will bear Root the same year that they are set in; he may if he please, plant Strawberries, Primroses, and Violets amongst the Rose-trees and they will prosper very well.

Gilliflowers, Carnations, or *July* flowers, so called, because in *July* they are in their prime and glory; these for beauty and scent are next to the Rose, they are of several curious colours, and smell like the Cloves, and therefore of some are termed Clove-*July*-flowers: These are to be set of young slips without shanks, taken from the old Body, or Root; and when that the Gardiner sets them, let him leave one joynt (next to the leaf) at the top of the Ground, so that the Ground be above the top of the middle

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joynt;

Joyn't; for if he set any part of the Leaves within the Ground, the Gilliflowers heads will never prove. Earthen Pots are good, which have holes in or near the bottom, in which pots let him plant his Gilliflowers, and in dry weather, twice a week in the Summer-time set them in a Tub of water, for three hours or more. But let no water come to the top of the pot, but the Rain, the pot will suck up a sufficient moisture at the bottom holes: The Gardiner shall never need to take in his pots but in frosty weather.

Wall-*July*-flowers usually growing on Walls; (for they delight to grow in Lime, and Mortar) they will sometimes seem dead in the Summer, and be green, and bear flowers in the Winter; they bear store of seed, which he may sow, and set the slips: If he have them grow upon a Wall, let him dig little holes betwixt the Bricks and Stones with an old Knife, and put in the seed.

Tulips are very beautiful Flowers, but have no scent; they adorn a Garden well, or a House; their Roots are all like Onions, which the Gardiner must set in *January*, if there be no Frost, and after they have done bearing, about *Michaelmas* let him take up the Roots out of the Ground, which will be double, and keep them dry in a Box against the next year.

Primroses, so called, as they are the first Flowers in the Spring; they are very sweet, growing both single and double: when the Roots grow too great, part them in two or three quarters, and set them again, though they be flowered, they will grow.

Cowslips are dainty sweet Flowers, they also grow both single and double; and if the Roots grow

grow broad, you may sever them as you did the Primrose.

Hearts-ease or Pansies, they are in shape almost like a Violet: they shed their seeds, and dye, but come thick up the next Spring.

Lavender is wondrous sweet, both Leaf and Flower, good for shew; their Roots will grow double like a Tulip, which being parted must be new set.

Marigolds shew pleasant, and are of a reasonable scent; you may sow them of seeds, or set young plants.

Daisies are white, red, or mingled colours, they make a pretty shew in a Garden in the Spring; their Roots growing too thick and too broad, are to be parted and new set.

Flower-de-luces also make a great shew in a Garden; the Roots are to be severed and new set, which being dried smell sweet.

Lillies that are red make a pleasant shew, but have no scent; their roots grow like Garlick double, but bigger, which being parted and new set, will grow again.

White Lillies, their roots are not like the red; their roots also are to be parted, and set as the red Lilly.

Crocuses must be used and set as the Tulip; if the Gardiner set them in his Borders; they will make a pretty shew in the Spring.

Lupines proceed from a seed sown in *April* and *March*; they bear a delicate flower, and the green leaves are of a strange shape; they bear Cods like small Beans, in which are seed.

Holy-hocks are white and red; he may sow them of seeds, or plant the root.

Piony must have the roots parted and set, the green leaves spread very broad; it beareth a great beautiful red flower: The seed of it must be sown in the spring.

French Mallows make a handsome shew; they are so to be sowed in the spring.

Saffron flowreth about *Michaelmas*; when the flowers fade, it is to be set of roots, which ought to be removed every third year about *Midsummer*.

Poppy hath a very fair flower, and of a pretty colour; the seed of it must be sowed in the Spring.

Batchelors-buttons are sowed in the Spring-time, or the roots may be planted.

Sweet Sissly hath a pleasant scent; he may sow the seeds, or part the roots and set them.

Rose-Campions may likewise be sowed of seed, or the Roots planted.

Flower of the Sun groweth very high, and beareth a great yellow flower, as big as the crown of a hat, it openeth and shutteth with the Sun (like the Marigold) the seeds must be set in *February* or *March*, about a finger deep.

Strawberries are white, red, and green; but the best Strawberries are gathered out of the Woods, which have Roots well bearded: Let him set them in *January*, *February*, or in *August*, three inches one from the other, in the beginning of the last Quarter of the Moon.

I shall next follow the order of the growing and setting of green sweet Herbs for the Summer-Garden.

Angelica groweth big and broad, and lasteth long;

long; you may sow it of seeds in the Spring, and the Roots may be removed after the first year. Lovage groweth much like to Angelica, and it is to be ordered in the like manner.

Anniseeds are produced of seeds sowed; they dye the first year, and so doth Coriander.

Coast-mary may be sowed of seeds, or the roots parted and set in *March*, are best.

Featherfew is to be sowed in *March* or *April*.

Oculus Christi is best to be sowed of seeds, or upon any remove of the young Plants, and new set them,

Herb-of-Grace, or Rue, the best way to set it is of slips; it is green most part of the year, and thrives best in the shade: Southernwood is to be ordered like Rue.

Dutch-box grows green most part of the year, it is very handson for Works and Borders; he may part the Roots and set them.

Rosemary is a tender Herb, the best setting of it is in *April*, or in the end of *March*, the Gardiner must set such as have no Blossoms, and as he takes it from the Branch, but by no means let him slive it, or tear the slips, but cut them off a little from the body, leaving some few leaves behind on the piece, and then it will grow again, otherwise the body being hurt, it will never grow.

Bay-roots will proceed from the Bay-berry, being set in the Spring, or he may plant the young suckers which spring from the Root.

Hony-suckles or Wood-bine, the Gardiner must get them in Woods or Hedges in the Fields, but let him dig enough to have their Roots; prune them, and plant them against the side of a House, or a Wall,



Wall, or Pole, and they will yield a most pleasant shade, or a comfortable scent: They must be taken up in *January, February*, or the beginning of the Spring.

Hedges or Quick-sets in his Gardens, may be made either with Suckers of Goosberry-trees, Currants, Privet, or Hawthorn-thorn, planted in *January and February*, at the Increase of the Moon.

Eglantine, or Sweet-bryar, is to be set on suckers also, and in those months also, as the former; they will grow from the Red-Hips, which they bear, but it will be long before they come to any bigness.

In *August*, four days after the change, or three days before the Full Moon, let the Gardiner cut all his winter Herbs within an handful of the Ground, then will they get head against the *VVinter*, and it will preserve them the better from hard weather; and in the end of *September*, let him sift the earth, or a good Mould upon them, to cover the Roots well, otherwise the Frost and Rain will bear the Earth from the Roots, that the Herbs will be in danger of being killed. And such Herbs as the Gardiner intends to keep against *VVinter*, let him cut them often, to keep them from seeding (for seeding doth kill most Herbs) by this means they will live the better in *VVinter*; but let him have a care that he do but seldom cut his Herbs in the wane of the Moon.

To have Flowers great, let him remove them once a year, the second or third day before the Full Moon, and so Plant them in *August*, as in *March* the weather being warm, and the ground wet, they will grow.

To dry Herbs for Broths or for Chests, he must make

make use of Plants set in the Sun in *August* in their Flowers; as *VVinter-savory*, Time, Marjoram, Pennyroyal, Mints, Balm, Rosemary-Tops, Marigolds, Lavender, Rose-leaves, &c. Let him gather them as he dries them, when he sees the morning fair and hot, and the Herbs dry.

The best and worthiest Roots of Herbs, for the most part are to be gathered in apt and fit seasons and places, when that the Leaves are beginning to fall off, and the Fruits and Seeds already shed, so that the season be fair: For done in a Rainy day, the Roots will be rendered the weaker, when they are filled with unnecessary moisture.

The Flowers in like manner are to be gathered, as the Borrage, Bugloss, and all others of like sort, when they are wholly opened, and before they are feeble, except the Flowers of the Rose and Jasmine, which ought to be gathered for the better and longer keeping before that they are much, or rather but a little opened.

The Leaves and whole Herbs are to be gathered, when that they are come to their growth and perfection.

The Fruits, and Mellons, Cucumbers, Citrons, and Gourds, when they appear yellow, and are come to their perfect growth and perfection.

The Seeds in like condition are to be gathered when they are well ripened, and before they shed on the Earth; but those that do remain on the earth, after the Herbs are thoroughly dried, ought to be rubbed forth with the hands, and kept unto the time of sowing.

Let the Gardiner remember that seeds ought to be gathered in a clear season, and in the wane of the Moon.

And

And let the Gardiner take this for a general Rule to be observed, That always all those things that are to be gathered, as the Herbs, Flowers, Roots, Fruits, and Seeds, that they are to be gathered in a fair and dry season, and in the decrease of the Moon.

The Herbs which the Owner intends to keep, are to be pickt, and to be preserved by cleansing; let them be dried in the shade, the place being open towards the *South*, not moist, and free from smoak and dust.

These are to be put in Leather-bags rather than Canvas, the mouths at the hanging up fast tied, or into wooden Boxes of the Box-tree, to the end that the Herbs may not lose their proper virtues.

The Flowers ought to be dried no otherwise than by the Sun at Noon, but more especially through the sharp heat of the same, together with the heat of the Air, unless it be our Rose of the Garden, which is to be preserved for a longer time, and it is to be longer dried, and more moderately in a high place, standing open to the Sun at Noon, or so that the Sun-beams enter into, but yet touch not the Rose-leaves.

The best way for drying of Flowers, is to lay them in a temperate place, free from moisture, dust, and smoak, and to stir them to and fro, that they corrupt not in the drying, so as to lose neither colour, nor the natural favour.

The finer seeds are to be preserved in Leather-bags, or in Earthen Vessels, having very narrow mouths, or else in Glass-bottles, or Gally-glasses very well stopp'd.

But the seeds of Onions, Chibols, and Leeks, as also of Poppy, are to be preserved in Husks and Heads.

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For the preserving of Roots, the Gardiner ought to learn and exercise two means; the one for keeping of them fresh, and the other for the round Roots, as the Navew, Radish, Carrot, and other like sorts, for to preserve them dry.

The way and means to preserve Roots fresh, is to bury them in a Cellar, in Gravel or Sand well turn'd upon them, or in a Garden-ground reasonably deep digg'd, even as he doth for the Radish and Navew in the Earth, that he may enjoy the commodity of them for the greater part of the Winter: To preserve Roots dry, the Gardiner (after the plucking of the Roots out of the Earth) ought to wash them very clean with Conduit or Spring-water, afterwards to cut away all the small and hairy Roots; which done, to dry them in a shadowy place, free from the beams of the Sun, if so be that they are slender or thin Rind'd, as the roots of the Fennel, Succory, Parsley, Endive, Borrage, Bugloss, Sperage, and sundry such like. But if the Roots are thick of Rind, of a gross Essence, and big, then must the Gardiner lay them dry in the Sun at Noon-day, as the Roots of Gentian, the Earth-Apple, Briony, Rapontick, Aristolocia, or any others like them.

All the Field-Plants, Flowers, and Roots, are longer in Nature, but in substance inferiour to the Garden-plants, &c.

Among wild Plants, those growing on the Mountains, do excel the others in property.

Amongst all Plants, those are of a stronger Nature, more especially those that are of a livelier colour, better taste and favour.

The Herbs which one would use for the Kitchen, ought rather to be gathered with a Knife, somewhat  
above

above the Earth, when they are shot up to their perfect growth, as the Beets, Succory, Atach, Borrage, Marigold, Colewort, Endive, Clary, Rocket, Basil, Marjoram, Mercury, Lettice, Parsley, and many others.

Thus I have, as briefly as I could, discoursed of Fruits, fundry Herbs, and Flowers, how they are properly to be gathered, and, according to their diversity, to be preserved; all which Instructions and rare Secrets, I have in part borrowed out of the Treasures of the best and most experienced Professors of Husbandry; together with what I have got through my earnest Importunity from some of my most intimate Friends. I beseech God to vouchsafe his Blessing to these my poor Endeavours.

*Of Bees.*

**I**N the keeping of Bees there is little charge, but they require good attendance to the time that they shall cast the Swarm. To which purpose it will be convenient that the Hive be set in a Garden or an Orchard, whereas they may be kept from the North-wind, and the mouth of the Hive towards the Sun. In *June* and *July*, they do most commonly cast, and they should have some low Trees nigh to them before the Hive, that the Swarm may light upon; and when the Swarm is knit, take a Hive, and splint it within with three or four splints, that the Bees may knit their Combs unto it, and annoint the splints and sides of the Hive with a little Honey; and if he have no Honey, let him take sweet Cream, and then set a Stool or a Form nigh to the swarm, and lay a clean washed sheet upon the stool, and then

let

let him hold the small end of the Hive downwards, and shake the Bees into the Hive, and then presently set it upon the stool, and turn the corners of the sheet over the Hive: Let him leave one place open, that the Bees may go in and out; but let him do this quietly; for he must not in any wise fight or strive with them: And let him lay Nettles on the boughs where they were knit, to drive them from the place; and then let him watch them all that day, that they go not away; and at night, when all are gone up to the Hive, let him take it away, and set it where it shall stand, and take away the sheet, and let him have Clay ready tempered, to lay about it upon a board or stone where it shall stand, that no wind come in; but the board is better, and warmer. Let him leave a hole open on the South-side, of three Inches broad, and an Inch of height, for the Bees to enter in and out. And then let him make a covering of Wheat or Rye-straw to cover, and house the Hive above, and let him set the Hive two foot or more above the Earth upon the stakes, so that a Mouse, nor any other Beasts or Vermine may come near it. But if a Swarm be cast late in the year, they should be fed with Honey in the Winter, and laid upon a thine narrow board, or Slate, or Lead put into the Hive, and another thin board should be set before every Hives mouth, that no wind come in; and to have four or five little nicks made in the nether-side, that a Bee may come out or go in, and so furnished, that the wind blow it not down; and so ordered, that he may take it up when he will. That Hive that is fed, let the mouth of it be stopt clean, that other Bees come not in; for if they do, they will fight and kill

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one another. And let him beware that no Wasps come into the Hive; for they will kill the Bees, and eat the Hony. There is also a Bee called a Drone, which is greater than another Bee: This Drone will eat the Hony, and gather nothing, and therefore they should be killed; it is a common saying, that the hath lost her sting, and that therefore she will not labour as the others do.

*How to keep Beasts and other Cattel.*

**I**F a Husbandman would keep Cattel well to his profit, he must have several Closes and Pastures to put them in, the which should be well quick-setted, ditched, or hedged, that at his pleasure, he may sever his biggest and strongest Cattel from the weakest, and especially in Winter time, when they shall be foddered. And though a man be but a Farmer, and shall have his Farm twenty years, it is less cost for him, and more profit for him to quickset, ditch, or hedge, than to have his Cattel go before the Herdmen; for let the Husbandman spend in three years as much money as the keeping of his Beasts, Swine, and Sheep do cost him in the years. Then alwaies after he shall have all manner of Cattel with the tenth part of the cost; and the beasts shall like much the better, and by this means the Herdsman shall have for every beast two pence a Quarter, or thereabouts. And the Swine-herd will have for every Swine at least a penny. Then he must have a shepherd of his own; or else he shall never thrive: Then reckon Meat, Drink, and Wages for his Shepherd, the Herdsmans, and the Swineherds Hire: these charges will double his Rent, or arise

arise nigh to do so, except his Farm be above forty pounds *per Annum*. Now let us compute what these Charges will come to in three years; but let him lay out as much money in Quick-setting, ditching, and hedging, and in three years he shall be discharged for ever, and much of his labour; he and his servants may do with their own hands, and save much money. And then hath he every field in severality, and by the assent of the Lord and the Tenants, every Neighbour may exchange his Lands with the other. And then shall his Farm be twice as good in profit to the Tenant as it was before, and as much Land kept in tillage; by this means the rich man shall not over-eat the poor man with his Cattel, and the fourth part of the Hay and Straw shall serve his Cattel better in a Pasture, than four times so much will do in a House, and less attendance, and the Cattel shall like the better.

*To buy fat Cattel.*

**I**F the Grasier shall buy fat Oxen or Kine, let him handle them, and see that they are soft on the fore-crop behind the shoulder and upon the hindermost Rib, and upon the Huckle-bone, and the Nache by the Tail: Let him see that the Ox have a great Cod, and the Cow a great Navel; for then it is very likely that they are well tallowed. And let him take heed where he buyes any lean Cattel or fat, and of whom, and where it was bred: For if he buy out of a better ground than he hath of his own, that Cattel will not like with his. Also let him look, that there be no manner of sickness amongst the Cattel: whether there be any Murren

or Long-saught amongst them, which may prove very dangerous; for a beast may take a sickness ten or twelve dayes or more before it appears on them.

*To buy lean Cattel.*

**T**hat Husbandman that will thrive, must be well furnished with Cattel, he must rear and breed some Calves and Foals, or else he must be a Buyer. If he buy Oxen for the Plough, let him look that they are young & not gouty, neither broken of Hair, of Tail, or of Pizzle. If he buy Kine for the Pail, let him see that they are young and likely to give good Milk; and let him be sure that he feed her Calves well. And if he buy lean Oxen, let him feed and fat them, the younger they are, the better they will feed, and sooner gain flesh: but (as we have said) let him look well to the Hair, that it stare not, and that the Beast lick himself, be whole mouthed, and want no teeth. And though he have the Gout, and be broken both of Tail and Pizzle, yet will he feed. But the Gouty Ox will not be driven far. Let him also be sure, that he have a broad Rib and a thick Hide, that he be loose skinned, that it stick not hard nor strait to his Ribs, for then he will not feed.

*To Rear Calves.*

**I**t is convenient for a Husbandman to rear Calves, and especially those that come betwixt *Candimus* and *May*; for at that season he may best spare Milk, and by that time the Calf shall be weaned, there

there will be Grass enough to put him into, and at Winter he will be big enough to save himself amongst other beasts, with a little favour. The Dam of the Calf shall Bull again, and bring another by the same time of the year: but if he shall tarry till after *May*, the Calf will be weak in Winter, and the Dam will not bull again, but oftentimes go barren. And if he shall rear a Calf that cometh after *Michatimus*, it will be costly to keep the Calf all the Winter season at Hay, and the Dam at hard meat in the house, as they use in the plain Champion Countries. And a Cow shall give more milk with a little grass and straw, lying without in a Close, than he shall do with Hay and Straw lying in a House, for the hard meat dryeth up the Milk. But he that hath no Pasture must do as he may: but yet it is better for the Husbandman to sell those Calves, than to rear them, because of the cost, and also for the profit of the Milk to his House, and the rather the Cow will take the Bull. If the Husbandman go with an Ox-plough, it is convenient that he rear two Ox-Calves, and two Cow-Calves at the least to uphold his stock; and if he rear more, it will be the more profitable for him. It is better for the Husbandman to wean his Calves at Grass, than at hard meat, if they went to grass before. And that man that may have a Pasture for his Kine, and another for his Calves, and water in them both, may rear and breed good beasts with little cost. And if the Husbandman wean his Calves with Hay, it will make them big-bellied, and they are the likelier to rot when they go to grass. In Winter they should be put in a House by themselves, and given Hay over night, and put in a good Pasture in the day time,

time, which will render them much the better to handle when they shall be Kine or Oxen.

*To geld Calves.*

**I**T will be a fit time to geld Calves in the old of the Moon, when they are ten or twenty dayes old; for then is least danger, and the Ox shall be the higher, and the longer of body, and the longer horned. And that may be thus proved: take two Ox-calves, both of them of one kind, one making, and both of one age, geld one of them, and let the other go forth, and be a Bull. And put them both in one pasture until they are four or five years old, and then shall you see the Ox-calf far greater every way than the Bull. There is no other cause of this but the gelding. And if he geld them not till they are a year old, there will be the more danger, and he will be less of body, and shorter horned.

*Of which is the greatest loss, a Lamb, a Calf, or Foal.*

**I**T is less damage to a Husbandman to have his Cow to cast her Calf, than an Ewe to cast her Lamb; for the Calf will suck as much Milk ere it be fit to be killed, as it is worth, and of the Ewe cometh no profit of the Milk, but the Lamb. Howsoever they use in some places to milk their Ews when they have weaned their Lambs, but that is a great hurt to the Ews, insomuch that it will cause them that they will not take the Ram at the time of the year, because of their leanness, but grow barren. And if a Mare cast her Foal, that is thrice so much

loss.

loss. For if the Foal come of a good breed, the loss is so much the greater, and in a short time the Foal may be sold for as much money as would buy many Calves and Lambs.

*What Cattell should go together in one Pasture.*

**B**Easts alone, not Horses alone, nor Sheep alone, (except it be Sheep upon a very high Ground) will not eat Pasture even, but leave many in Fees and high grafs in divers places, except it be overlaid with Cattell. Therefore we may the better take notice, that Horses and Beasts will agree well in one Pasture, for there is some manner of Grass that a Horse will eat, that a Beast will not, as the Fitches, Flashes, and low places, and all the hollow Bundes and Pipes grow therein. But Horses and Sheep will not so well agree, except it be sheep to feed; for a sheep will go on a bare Pasture, and will eat the sweetest Grass, and so will a Horse, but he would have it longer. Howsoever he will eat as close to the Earth as a sheep, but he cannot so soon fill his belly. To a Hundred Beasts the Husbandman or Grasier may put in twenty Horses. If it be low ground, and if there be Grass enough, he may put in an hundred sheep, and so after the rate, the pasture more or less: and after this manner they may feed or eat the Close even, and leave but few tufts. But if it be high ground, let him put in more sheep, and less Beasts, and Horses. Milch Kine and draught Oxen will eat a Close much barer than as many fat Kine and Oxen. A Milch Cow may have too much meat, for if she grow fat, she will the rather take Bull, and give less Milk for the fatness

stoppeth the Pores and the Veins that should bring the Milk to the Paps, And therefore mean Grass is best to keep her in a low estate. And if a Cow be fat, when she should Calve, then is there great hazard of her, and the Calf shall be the less; but the Husbandman cannot allow his Draught Ox too much meat, except it be the after Mathe of a low-mown Meadow, for that will cause him to have the the Girte, and then he is not so fit to labour. And if there be too much Grass in a Close, the Cattel shall feed so much the worse, for a good bite to the earth is sufficient; for if it be long, the Beasts will bite off the top and no more, for that is sweet and the other lyeth still upon the Ground, and rotteth, and no Beasts will eat it but Horses in Winter: But these Beasts, Horse, and Sheep, may not be foddered together in Winter; for then they should be severed, for else the Beasts with their Horns will gore both the Horses and the Sheep in their bellies. It will be necessary to make standing Cratches to cast their Fodder in, and the Staves set right enough together for pulling their Fodder out too hastily for shedding. And if it be laid upon the Earth, the fourth part thereof will be lost: but if he is forced to lay it on the Earth, let him lay it every time in a new place, for the old will spoil the new.

*Of Swine.*

**T**He Husbandman that is well furnished with other Cattel, it will also be very profitable for him that he have Swine: it is a common saying, That he that hath Sheep, Swine, and Bees, sleep he or wake he, may thrive: and the saying is, because

cause that from these things the greatest profit ariseth with the least cost. Therefore let the Husbandman consider with himself how many Swine he can conveniently keep: let them be Boars and Sows all, and no Hogs. And if he be able to rear six Pigs a year, then let two of them be Boars, and two of them Sows, and so to continue after that rate: For a Boar will require as little Keeping as a Hog, and is much better than a Hog, and hath more meat on him, and is ready at all times to cut in the Winter-season, and to be laid in Soufe. And a Sow before she be fit to be killed, shall bring forth as many Pigs and more, as she is worth; and her body is not the worse, but will be as good Bacon as a Hog, and asketh as little keeping, but at such a time as she hath Pigs. And if his Sow hath more Pigs than he intends to rear, let him sell them, or dispose of them for his Family; but let him rear those Pigs that come about *Lent*, especially at the beginning of Summer; for they cannot be reared in Winter for cold, without great cost.

*Of the Properties of Horses.*

**A** Good Horse hath several properties, two of a Man, two of Baufon or Badger, four of a Lyon, nine of an Ox, nine of a Hare, nine of a Fox, nine of an Ass, ten of a Woman.

The two properties that a Horse hath of Man, is to have a proud heart; the second is to be bold and hardy.

The two properties that a Horse hath of a Baufon or Badger, is first to have a white Rase or Ball on the Forehead; the second to have a white Foot.

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The four properties that a Horse hath of a Lion, is first to have a broad Breast, the second to be stiff-Necked, the third to be wild of Countenance, the fourth to have good legs.

The nine properties that a Horse hath of an Ox, is first to be broad-Ribbed, the second to be low-Brawn'd, the third to be short-Pasturned, the fourth to have great sinews, the fifth to be wide betwixt Challes, the sixth to have a great Nose, the seventh to be big on the Chine, the eighth to be fat and wall sed, the ninth to be upright standing.

The nine properties that a Horse hath of a Hare, is first to be stiff-eared, the second to have great eies, the third to have round eyes, the fourth to have a lean Head, the fifth to have lean Knees, the sixth to be light of Foot, the seventh to turn upon a light ground. the eighth to have short Buttocks, the ninth to have two good Fillets.

The nine properties that a horse hath of a Fox, is first to be prick-Eared, the second is to be little-Eared, the third is to be round-sided, the fourth is to be side-Tailed, the fifth is to be short-Legg'd, the sixth is to be black-Legg'd, the seventh is to be short-Trotting, the eighth is to be well-Coloured, the ninth is to have a little Head.

The nine properties that an Horse hath of an Ass, the first is to be smal-Mouthed, the second is to be long-Reined, the third is to be thin-Crested, the fourth is to be strait-backed, the fifth is to have small Stones, the sixth is to have Lath-Legs, the seventh is to be round-Footed, the Eighth is to be hollow-Footed, the ninth is to have a rough Foot.

The ten properties a Horse hath of a Woman, the first is to be merry at Meat, the second is to be well-Paced,

Paced, the third is to have abroad Fore-head, the fourth is to have broad Buttocks, the fifth is to be hard of ward, the sixth is to be easie to be leapt upon, the seventh is to be good at a long Journey, the eighth is to be ever busie with the Tongue, the ninth is to be chewing the Bridle, the tenth is to be active and stirring under a man.

*Of the divers Diseases of Cattel, and the Remedies thereof, and first of the Murrain.*

**T**He Murrain proceeds from a rankness of Blood, it appeareth first most commonly in the Head; for the Head will swell, & the Eies wax great, and run with water, and froth at the mouth, which are certain signs that the Beast is past remedy; for he will not eat after he hath fallen sick, The best way is to tye him, and to make a deep pit hard by the place where he dyeth, and so to cast him in, and cover him close with earth, that no Dogs may come to the Carrion. For as many Beasts as smell of that Carrion, are very likely to be infected. And then let them take the skin, and carry it to the Tanners, and sell it. It hath been a common charitable custom, to take the bare Head of the same beast, and put it upon a long pole, and set it on a Hedge fast bound to a stake by the high-way side, that every man that rideth or goeth by that way, may see and know by that sign, that there is sickness of Cattel in that Township. And the good honest Husbandmen in those parts are of opinion, that this may be a means that the Murrain may the sooner cease: when the beast is flay'd, the Murrain will appear betwixt the flesh and the skin, and it will rise up like



The four properties that a Horse hath of a Lion, is first to have a broad Breast, the second to be stiff-Necked, the third to be wild of Countenance, the fourth to have good legs.

The nine properties that a Horse hath of an Ox, is first to be broad-Ribbed, the second to be low-Brawn'd, the third to be short-Pasturn'd, the fourth to have great sinews, the fifth to be wide betwixt Challes, the sixth to have a great Nose, the seventh to be big on the Chine, the eighth to be fat and wall-fed, the ninth to be upright standing.

The nine properties that a Horse hath of a Hare, is first to be stiff-eared, the second to have great eies, the third to have round eyes, the fourth to have a lean Head, the fifth to have lean Knees, the sixth to be light of Foot, the seventh to turn upon a light ground, the eighth to have short Buttocks, the ninth to have two good Fillets.

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like a Jelly or Froth an inch deep or more; and the best Remedy for the Murrain, is to take a small Curtain-rod, and bind it hard about the Beasts neck, and that will cause the blood to com into the Neck; and on the other side of the Neck, there is a Vein that a man may feel with his finger, then let him take a blood-Iron, and set it straight upon the Vein, and blood him on both sides, and let him bleed the quantity of a pint, or nigh it, and then let him take away the cord, and it will stanch bleeding. And thus let him serve all his Cattel in that Close or pasture, and by Gods blessing there shall no more of them be sick.

*Of the Long-saught, with the Remedy.*

**T**His sickness will endure long, it is perceived by its hoissing, the Beast will stand much, and eat but little, and grow very hollow and thin, and he will hoist twenty times in an hour, but few such do mend. The best Remedy is to keep the Cattel in sundry places, and as many as were in company with that Beast that first fell sick, to let them blood a little. There are many Farriers that can sever them, that is, to cut the Dew-lap before; there is a Grass called Fetter-grass, take that Grass, and bruise it a little in a Morter, and put thereof as much as a Hens Egg into the same Dew-lap, and be careful that it fall not out.

*Of Dewholm, and the hard Remedy thereof.*

**T**His Disease comes when a hungry Beast is put into a Pasture full of rank Grass, where he will

will eat so much, that his sides will stand as high as his back-bone, and at other times the one side more than the other. When the Beast hath this disease with the swelling, he must not be driven hastily nor laboured. The substance of this distemper is but a wind, and therefore he should be softly driven, but not suffered to lie down. I have seen a Farrier take a Knife and thrust the Beast thorow the skin and the flesh, two Inches deep or more, six Inches or more through the Ridge-bone, that the wind may come out; for the wind lieth betwixt the Flesh and the great Paunch.

*Of the Rysen upon, and the Remedy thereof.*

**F**ew or no men know from whence this Disease proceedeth; but you may perceive it by swelling in the Head, and more especially by the Eies; for they will run on water, and close the beasts sight, which many times causes them to dye within an hour or two, if they are not suddenly taken in hand. The cause of this disease is, that there is a Blister risen under the Tongue, the which Blister must be slit with a Knife across: when he hath pulled out the Tongue, let him rub the Blister well with Salt, & take a Hens Egg, and break it in the beasts mouth, shell and all, and cast Salt with it, and hold up the the beasts head, that all may be swallowed down into the body. But the breaking of the Blister is the great help, let him drive the Beast a little about, and this shall cure him by the help of God,

*Of the Turn, and the Remedy thereof.*

**T**Here are Beasts that will turn about when they eat their meat, and will not feed: 'Tis a dangerous disease for them, by reason that they are subject to fall in Pits, Ditches, or Waters. The cause of this Distemper proceeds from a bladder in the Fore-head, between the Brain-pan and the Brains, the which must be taken out, or else the Beast shall never mend, but it will kill him. This is the Remedy, and the greatest Cure that can be on a Beast: Take the Beast and throw him down, and bind his four feet together, and with his Thumb let him thrust the Beast in the Fore-head, and where he finds the softest place, there let him take a Knife, and cut the skin three or four Inches on both sides between the Horns, and as much beneath towards the Nose, and flay it, and turn it up and down, and pin it fast with a pin. And with a Knife cut the Brain-pan two Inches broad, and three Inches long; but let him look that the Knife go no deeper than the thickness of the bone, for perishing of the brain: Let him take away the bone, and then he shall see a Bladder full of water two Inches long and more. Let him take that out, and be sure that he hurt not the Brain; and then let him lay down the skin, and sew it fast as it was before, and bind a Cloth two or three-fold upon his Fore-head, to keep it from cold and wet, for ten or twelve days together: Thus have I seen many Cured. But if the Beast be fat, and have good substantial meat upon him, it will be safer to kill him, for there will be but little loss. If the Bladder be under the Horn,

it is past Cure. A Sheep will be troubled with the same distemper; but I never saw any of them Cured.

*Of the Warrey-breed, and the Remedy.*

**T**Here are Beasts that have this Disease in divers parts of their Body and Legs. This is the Remedy; cast the beast down, and bind his four Legs together, and let the Farrier take a Culter or pair of Tongs, or such other Iron, and make it glowing hot; and if it be a long Warry-breed, let him sear it close to the body; and if it be in the beginning, and but flat, then let him lay the hot Iron upon it, and sear it to the bare skin, and it will prove a perfect Cure.

*Of the Foul, and the Remedy.*

**T**His Disease is for the most part between the Clees, sometimes before, and sometimes behind; it will smell, and cause the beast to halt. This is the Remedy; cast him down, and bind his four feet together, and take a Rope hard writhen and twisted together, and put it between his Clees, and let him draw the Rope too and fro for a good space, till that he bleed well, and then let him lay to it soft-made Tar, and bind a Cloth about it, that no Mire or Gravel get between the Clees, then put him into Pasture, or let him stand still in the House, and he will suddenly mend.

*Of the Gout without Remedy.*

**T**Here are Beasts that will have the Gout, and that for the most part in the hinder-feet, which will cause him to go stiffly and halt. I never knew any man that could find such a Remedy as to cure this distemper: the only way to be taken, that I know of, is to put him into good Grass, and let him feed well.

*To help a Beast that pisseth Blood.*

Take of Bloodwort, of Shepherds-purse, or Knot-grass, of each a like quantity, and stamp them together strain them with a quart of Milk of one coloured Cow, and put therein a little Runnet made of the same Milk, and mix therewith the Leaven of brown Bread, then strain them all together, and give it with a Horn: use this morning and evening, and it will cure him.

*A Remedy for the Blain in the Tongue.*

**I**T is a certain Bladder growing above the Root of the Tongue against the pipe, which grief at length with swelling, will choak and stop the wind: You may perceive this distemper by his gaping, and holding forth of his Tongue, and foaming at the mouth; without a speedy Remedy, it will suddenly kill him. The Cure is, to cast him, and to take forth his Tongue, and slit the Bladder, or break it thereon; then wash it with a little Vinegar and Salt, and he will recover.

To

*To help a Beast that is goared.*

Takes Ashes finely sifted, and mix them with the grounds of Ale and Beer, and make it as thick as Butter, and so lay it thereon, and it will heal it.

*A Remedy for the Pantasie in a Beast.*

**T**His Disease will shake him much, and make him quiver in the Flanks, and pant extreamly. For the Cure, you shall give him some Runnet, Soot, and Chamber-lye mixed together.

*To kill Lice and Ticks in Cattel.*

Take the Decoction of wild Olives mixed with Soot, then rub and chafe the beast all over therewith. Another; Take Bearfoot-herb, stamp it, and then strain it with Vinegar mixt with it, and so apply it.

*A sovereign Remedy for the Plague in Cattel.*

**T**His Disease proceeds from an infection of blood; it appears first (commonly) in the Head; for the beasts Head will swell, and his Eyes grow great, and run with water. When he doth once froth at the mouth, he is past Remedy. For the Cure, take of wild Carrot, called in Latine *Daucus*, or wild Parsnep, of Groundsel, of Angelica-roots, or the Root of Sea-Holm, named Fringion, with Fennel-seed, and sprinkle it with sod Wine, and fine wheaten Meal, with hot Water, mix them so together, and give your sick Cattel to drink thereof, then soon after you shall make a Drink of Cassia, Mirrh, and Frankincense, in like manner mixt with as much blood of the Sea-Tortoise, if you can get

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it;

it; then put altogether in a quart of good old Wine, and squirt it into their Nostrils. You must administer this Medicine three dayes together, every day a third part. Other Preservatives are these: You must change their Lays, and divide them into many parts, far off from thence, and also separate the whole from the sick; for one beast infected will infect all the rest in a short time: Thus when you have changed them into other parts, you must put them where you may be sure that no other beast doth feed with them.

*An approved Remedy for the Tetter in Cattel.*

**T**His Distemper is an ill-favoured Scurf or Scab growing on the skin or outward part of the beast. Some Tettters are broad, and some will grow long, and hang like a Cluster of Grapes, somewhat hard. It is supposed that they are increased through leanness and wet; or it may proceed from some venom'd Humor, or by some prick or bruise. The running or broad Tetter is cured by searing it round about with a hot Iron, then lay Tar on it, and it will take it away. Some also say that when the beast begins to be in good case, and lusty with eating of grass, that it will wear away of it self by degrees; for he hath it for the most part in the Winter, and not in the Summer.

*An excellent Cure for an Ox or Cow that hath a Fever.*

**T**His Disease is sometimes got by cold or other distempers: The signs thereof are, when his Eyes

Eyes are hollow, and seem as if they were heavy, dropping from his head, his mouth lathering and someing, drawing his breath very long and hard, with much pain, which occasions him sometimes to sigh. For the Cure, you must keep him a day and a night without meat or drink, then the next morning fasting you may draw a little blood from him, under his Tayl; about an hour after, give him thirty small Truncheons of Coleworts sod in Sallet-Oyl and salt Fish-water, or Brine, and force him to swallow it. Do thus to him for five mornings fasting; cast before him the tender branches of Olive-trees, or the tender buds of the Vine; rub and cleanse his Lips thrice a day, and give him cold water to drink, and keep him up till he be well. The Ox also is troubled with this disease, which proceeds from his too much labour: You must let him blood on the Vein of the Forehead, or on the Vein of his Ear. Then give him green Herbs, as Lettice, and such like, that are cold; bathe all his body with white Wine give him cold water to drink, and he will recover.

*An excellent Remedy for the Lungs of Cattel infected.*

**T**He Cure is; you must pierce one of his Ears with a little Bodkin, and being so peirc'd, put into the holes the burnt Roots of Hazel-trees, then take a quantity of the Juice of Leeks, with so much Sallet Oyl, and mix it with a pinte and an half of Wine, and give it him fasting. Use this nine days together, and he shall recover. This distemper

per proceeds from the Lights and Lungs of a beast infected, which will cause him to grow lean; till at length a common Cough will so dry his body, that it will kill him, if a sudden Remedy be not applyed.

*To help an Ox or any other Beast that have lost their Quide.*

**T**He Quide by some accident or other may fall from the beast, which will cause him to mourn, and have no stomach to eat; for that the meat which he hath already eaten, he cannot digest. To cure this distemper, take part of the Quide out of another Beasts mouth, and give it to the sick beast to swallow down, and by that means he will recover: But if he hath been long distempered, that he is much wasted and spent, then you must pull forth his Tongue, and prick the under-vein with an Awl in two or three places, till it bleed: this will cure him. *Probatum est.*

*A Remedy that fails not to cure a Beast that cannot piss.*

Take and bruise Carduus Benedictus steeped in white Wine, and so give it to him. Give an Ox that cannot piss, warm Water mixed with bran; also take and stamp Sow-thistle, and heat it with Ale and Beer, and it will help him.

*To cure a Cow of the Whethered.*

**T**His distemper falls upon her when she hath but newly calved, and hath not cast her cleaning, which

which without voiding will suddenly kill her. To Cure her, take a good quantity of the Juice of Mallows, mixed with Ale and White-wine, which is excellently good to Repulse the latter birth, after the Cow hath Calved.

*A Remedy for the Faintness of a Labouring Ox.*

That Ox that hath Laboured hard all the Winter at plough, and at the approach of the Spring, will be very Lean, and Faint, and Lousie, insomuch that with little or no Labour, they will lie down. To Recover and make him Lusty, before his watering, you must give him a good handful of Barley in the straw, and afterwards let him drink: Which will preserve him in a strong and good case.

*To recover the Leanness of a Cow.*

You must make a Drink, and give it her fasting, which is: Take of Long-pepper, of Madder, of the Bark of Walnut-tree, and Turmerick, with some Bays, of each a like portion: beat them into fine powders, and put them into a pint of Ale luke-warm, and she will be in a good liking, and far better plight.

*Remedies against the Worms in Cattel.*

Take and stamp Garlick, and mix it with Milk or Ale, and give it to the beast. Take a handful of Wood-sage, or Wild-sage, bruise it, and strain it with Ale, and give it: They are approved Medicines.

*Against the Milting of an Ox, or any other Beast.*

This distemper is so called from the beasts suddenly lying down, if there be but the least stop, though at Plough or Cart, which for the most part may proceed

ceed from some blow, stripe or other mischance. When the beast lies down, do not disturb him, so as immediately to raise him; but gently turn him, and lay him on the other side, and he will by degrees recover himself: For the Remedy, bruise the bark of an Ash, strain it with Ale, and so give it him, and he will do well.

*An excellent Remedy for the dropping Nostrils and watry Eyes of Cattel.*

Take Salt and Savory mixed together, and rub his Throat with it, as also his Jaws; also you may rub and chafe the said parts with Brine and Garlick mixed together, or else squirt in his Nostrils the Juyce of Pimpernel mixed with a little White-wine; These things are excellently good for the dropping Nostrils and watry Eyes of Cattel.

*To Cure the Garget in the Maw.*

This dangerous distemper proceeds from the beasts over eating of Crabs, or Acorns that they find under Trees, which for the most part they swallow whole without breaking or chewing, so that they lie so in Lumps in the Maw, that they cannot digest it; so that in time it will grow and sprout in the Maw (as some fancy) till it brings them into a dying condition. The Cure is, take a good quantity of whole Mustard-seed, and mix it with wine and strong Ale, and give it to the beast, and it will set him right.

*A Remedy against the Crying and Fretting of the Guts in Cattel, by some called, the Crowling.*

The Cure is, when the beast shall suddenly see any thing swim, especially (as some will have it) a Drake on the water, that he shall presently be Cured.

To

*To cure Apostumes in Beasts.*

Open the place with an Iron, and when it is cut, then you may crush out all the evil humour and matter in it, then stir and wash it with the warm brine of an Ox. Afterwards take Chairpi (so named of the French) mixed with Tar and white Oyl of Olive, plaister wise close the sore therewith: If you cannot wash the sore clean inwardly, you must melt the Tallow of an Ox or Goat, and so infuse it into the wound, and let it run down all about the bottom thereof. *Probatum est.*

*To cure a Beast that is Goared.*

If it be by some of his Fellow-cattel (to prevent some Gargel, or some Apostume that may proceed from it) you must take Ashes finely sifted, mix them with the Grounds of Ale or Beer, and make them as thick as Butter, and so lay it on the Goar, and this will certainly cure it.

*The best times to be observed to stop Laxes.*

You must observe when the Moon, is in the sign of *Taurus*, *Virgo*, or *Capricorn*, that will be the best time for to give your beast drink to stop it. Also it is not good to purge, or to let blood (without a great necessity) in the Change of the Moon, nor when there is an evil Aspect in one planet to another, nor in the signs of *Capricorn*, or *Aquarius*; for they are the two Houses of *Saturn* and *Mars*.

*A sudden and approved Remedy against a Sprain or Stroke.*

Take Butter, Black-Sope, and Hemlock-herb, with a quantity of Salt and Oyl proportionable; then mix them altogether, bathe the Sprain and Stroke therewith, as hot as he can endure it, and it will cure him. But if it be in the Legs, you must

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put

put unto them the things aforefaid, either with grounds of Beer or Ale, wash them therewith, and then wrap it about with a Hair-rope dipt in Chamber-lie, and the beast shall do well.

*To cure Calves that have the VVorme in their Bellies.*

These VVorms will annoy them much, and at length prove dangerous; they will take away their stomachs to their meat. The best Remedy is to take Lupin-pease half raw, bruise them and divide them into small pieces, make them to swallow them: Do this in the morning, and it will kill them.

*An approved Remedy for Costiveness in Cattel.*

A Swelling in Ox and Kine, is procured through heat, so that they cannot dung. The Cure is, to chase and drive them apace up and down: If they do not then dung, anoynt your hand with Oyl or Grease, then rake them, and take forth their dung.

*An excellent Cure for a Beast that is Hide-bound.*

This Disease happens to an Ox when he hath been over-laboured. For this Cure, seeth Bay-leaves in Ale, and so bathe him therewith, and immediately chase and rub him with Oyl and Wine mixed together, and so pluck and draw the skin on both his sides, till you have by degrees loosed it from his Ribs: Do this in a Sun-shiny-day, that it may the better dry and soak it.

*An excellent Cure for the Garget in the throat of a Beast.*

This Distemper will grievously afflict him; it commonly seizes on him through some great drought for want of water. The Cure is, you must

must cast him, then cut and flay his skin on both sides, as far as any swelling doth appear, then take the whitest sifted Ashes that you can procure, and mix them with the grounds of Stale and Piss, and stir them well together, and wash the flesh sore therewith, and it will heal it.

*A certain Remedy against the Worm in a Beasts tayl.*

This Worm will breed like to an eating Canker, which will make the beast of ill liking, very poor in flesh: When you offer to feel, you shall find this place somewhat soft; a little above the place on the sides of his Tayl, you must slit the skin down-right with a sharp Knife, two Inches long; then take a quantity of bruised Garlick and Salt mixed together, bind it fast to the place, and let it so remain till it do fall off it self, and the beast will do well.

*An approved Remedy to cure Galls and Scabs in Cattel.*

Take Garlick, and bruise it, and with it chase and rub all the Sores. If it grow to any great Sore, then rub the place with bruised Mallows mixed with white Wine, and bind them to the place.

*A Remedy for the Galling of the Neck or Throat with the Yoke.*

If it swell but of one side, you must let him blood on the Ear on that side; but if it be chafed in the midst of the Neck, then let him blood in both his Ears, and lay unto it a Plaster made with the Marrow of an Ox, mixed with the Suet of a Buck, and then melt them together with some Pitch and Tar, and you shall heal him.

*A Cure for the Itch in Cattel.*

It may proceed from bad dressing, he may take it from



from his Fellows, or it may come from ill water, and Choler in the Veins. The Remedy is to wash and chafe him with his own Urine made warm, and mixt with old Salt-butter.

*A Cure for the Flowing of the Gall.*

This Distemper proceeds from the abundance of Choler, increased by hard Travelling in hot Seasons; the Gall being filled with Choler, it overflows the whole body, causing the Yellows, or the Jaundice. For the Cure, take Gallwort-herb, which is bitter, and stamp a handful thereof, and then strain it with a quart of Ale, and so give it the beast to drink three mornings, and he will recover.

*An approved Remedy against the Collick in Cattel.*

This Distemper causeth a Girting and Rumbling of the belly, with a noise in the Guts; you shall see the diseased beast lie down, and rise presently, because his pain will not suffer him to take any ease or rest. If it be an Ox; bruise Garlick, or bruised Leeks, with a pint of Wine. The general Medicine to help Cattel, is to put into their Drink the Oyl of Nuts, or Onions boiled in sweet Wine.

*An excellent Remedy against the Haw in the Eye.*

This Disease is soon perceived by the Beasts holding of his head on one side, and his winking with his Eye, which will run of water. The Cure is, you must hold him fast by the head, with a strong double thread, put therewith a Needle in the midst of the upper Eye-lid, and tie it to the Horn, then take your Needle again with a long thread, and put it through the Gristle of the Haw, and with a sharp Knife cut the skin exactly round, and so pluck out the Haw; then

then lay a fine Linnen-cloth about the top of your finger; and put your finger inwardly round about his Eye, and take out the blood, then wash it with Beer or Ale, and cast in a good quantity of Salt, wash it again, and stroke it down with your hand: Let him go, and he will do very well.

*A Remedy for the Kibes in the Heel.*

Cut them forth as nigh as you can, and let them bleed well; then take Herb-Grace, and the Yolk of a new-laid Egg well beaten and stampt, and so bind it to the Grief, and it will help and heal it.

*An excellent Remedy for the Sickness of the Lungs.*

This Disease is perceived by the rising and shaking of the Dew-lap. For the Cure, take Bear-foot and beaten Garlick, wrap it in Butter, then cut his Dew-lap two Inches beneath his sticking-place, open it round with your finger, or with a stick, on both sides, and beneath, then put in your stuff: You must cut your Dew-lap four fingers above the bottom thereof; then must you tie a strong thread to your stuff, to pluck it up and down as you shall see cause every third day, and it will rot the sooner. If the humour do not rot, then change your stuff, and put in new, and he shall do well.

*Excellent Remedies for the Cough in Cattel.*

This Distemper proceeds from cold or over-travelling of the beast, or by eating of some unwholesome thing. For the Cure, take Stitch-wort chopt small, with husked Beans bruised together: You may also take of Lentil-pease cut out of their Husks, bruise them small, and mix them with three pintes of warm Water, and give it him with a Horn. If an Ox hath but of late got a Cough, you may  
Cure

Cure it by a drink made with Water mixed with Barley-meal.

*For the Navel-gall, with the Remedy.*

**T**His Distemper proceeds from a hurt with a Saddle, or with a Buckle of a Crupper, or from some other cause that hath hurt the midst of the Back: The Cures whereof are divers, and so they ought to be; for Medicine is to be administred according to the hurt, as it may be more or less. If it be but only Galled, take the Soot of a Chimney and Yest mixed together, and plaister it once or twice a day. Another Cure for it is, that if it be so hurt, that it swell, and is Apostumed, then Lance it on the nethermost part of the Ulcer, so that the matter may have issue downward; for if you should lance it at the top, then the corruption that remaineth will fistulate: If you find the Concavity deep, then make a Tent of Flax, and dip it in this Salve: Take of Deers Suet, of Wax, of Tar, and of Turpentine, of each three ounces, and one ounce of Rosin, mingle them together, and Tent the Wound; and if you see any dead flesh grow in it, then sprinkle the powder of Verdigrease upon it; lay upon the head of the Tent the plaister of the Yolk of an Egg, Hony, and VVheat-flour, and thus dress it morning and evening, and it will quickly be whole.

*Of the Worms, with the Remedy.*

**T**He VVorms lie in the great Paunch of the Belly of the Horse; they are engendred of raw and bad humours: There are three kinds of them; the

the Worm, the Bot, the Truncheon: some of them are of a shining colour, like a Snake, six inches in length, great in the midst, and sharp at both ends. The Horse when he is troubled with them, will lye down and wallow, which is when they feed on him; his breath will stink, and his mouth be clammy. The present Remedy is to give him a quart of Milk, and half a pinte of Honey in it blood-warm; this keeps them from gnawing of him, because they will suck thereof untill they are ready to burst: then the next day give him this Drink. Take a quart of Wort, or Ale that is very strong, then take a quarter of a pound of Fern, half a pound of Savin, half a pound of Stone-crop; stamp them, and mix them together with two spoonfuls of Brimstone, and as much Chimney soot, beaten to powder. Let them lye in steep two hours, then strain them, and give the Horse a little warm, bridle him, and let him stand six hours without meat, and question not but your Horse will be quiet and do well.

*Of the Farcy, with the Remedy.*

**T**His is a very bad disease, but may be cured, if it be taken in time; it will appear in divers parts of the body, where there will rise Pimples, and as much as half a Walnut shell; they will follow a Vein, and will break of themselves, and as many Horses as do play with him that is sore, and gnaw off the matter that runneth out of the sore, will have the same disease within a month after; and therefore let the Grasier keep his sick Horses from the whole. This distemper proceeds from an Ulcer which is not unknown to any that have for a long time

time been Masters of Horses, and yet unknown to all, I mean as to the cause of this disease: some say it is a corruption of blood, some an outward hurt, as of Spur-galling, biting of Ticks, Hogs Lice, or such like; some say an infirmity bred in the Breast near the Heart, in the Side-vessels near the Stones, with many evil humours congealed together, which afterwards disperse themselves into the Thighs, and sometimes into the Head, and do send forth watery humors into the Nostrils, and then 'tis called the running Farcy. Indeed if the true cause of a disease be known, the disease it self is easily cured. The Mange, the Leprosie, and this disease of the Farcy, are most pernicious to a Horse; for oftentimes it falleth out, that many Horses infected therewith, (though they live, and the disease seemeth to be healed, yet) they are rendred of small or no use. For my own part, I conjecture the cause of this disease grows either from abundance of bad blood, or by a great distemper thereof, through a violent heat, changed into a sudden cold. To cure this distemper, first, let him bleed on both sides of the Neck three quarters at least; for it is most certain, that the Liver which is the fountain of blood, is corrupted, and so sendeth the same into every part of the body, so as to become loathsome to behold: then give the Horse this Drink. Take a Gallon of fair Water, put into it a good handful of Rue, and a good spoonful of Hemp-seed, and a handful of the inner Rind of green Elder, bruise them in a Mortar together, and let them seeth until they are half consumed, and being cold, give it to him to drink: still continue to let him bleed a great quantity in that Vein which is nighest to the sore place, as you see  
occasi-


occasion. Let his dyet be thin, but very clean and sweet, then take this following approved Medicine. Of Herb-Grace a handful, of Featherfew a handful, of Chickweed of the House, a handful; of Kikweed a handful, of Herb Robert a handful, keep the residue thereof in a Pipkin close covered with the Earth, stop the mouth thereof close with Herb-Grace and Dock-leaves, and a green Turfe laid upon it, no Air to come in, and every third day untie his Ears and dress it, and so continue till all the Farcy be dead; for undoubtedly at three or four dressings it will kill it.

*Of a Courb, with the Remedy.*

**T**His disease makes a Horse to halt very sore; it appeareth most upon the hinder-legs, straight under the Cambrel place and a little beneath the Spaven: it will be swelled, and hard to cure, if it grow upon the Horse. The Cure is, take a pint of Wine-lees, a Porringer of Wheat-flour, of Cummin half an ounce, and stir them well together, which being warmed, charge the sore place therewith, renewing it once every day, for the space of three or four days; and when that the swelling is almost gone, then let them draw it with a hot Iron, and cover the burning with Pitch and Rosin melted together, and laid on warm, clap on a stocks of his own Collar, and let him rest, and come in no water for the space of twelve days. Another for the same: Take an Iron, and make it red hot, and hold it against the sore as nigh as you may, but touch not the sore, and when it is warm, then take a Fleam, and wet it in six or seven places full of Nervil, then take a  
handful

handful of Salt, and a penny weight of Verdigrease, and the White of an Egg, and put all these together, and lay it to the sore.

*Of Wind-galls in Horses, with the Remedy.*


**W**Ind-galls are a disease which proceeds from too much labour; they appear above the Foot-locks, as well before as behind: they consist of a little swelling with wind. This is a Grief many are acquainted withal. The cure is; wash the places with warm water, and shave the hair, then draw it with a hot Iron, in this manner ; that done slit the middle Line which passeth down-right through the Wind-gall with a sharp Knife, beginning beneath, and so upwards half an inch, thrust the Jelly out, then take Pitch and Rosin molten together laid on hot, with Flocks upon it.

*Of the Pains and Cratches of a Horse, with the Remedy.*

**T**His disease causeth a Horse to halt; it proceeds chiefly from ill keeping: it appears in the pasterns; as if the skin were cut over-thwart, that a man may lay in a Wheat-straw. This distemper proceeds from a frettish waterish matter bred in the pasterns of the hinder Legs, liquid and thin humors resorting to the Joynts, whereby the Legs will be swollen, hot, and scabby. The Cure is to wash the pasterns with Beer and Butter, which being dry, clip away all the hair, saving the Footlock; then take of Turpentine, Hogsgrease, and Honey, of all a like quantity, mingle them in a Pot, and put into them a little Bole of Armony, the Yolks of two Eggs,

Eggs, and as much Wheat-flour as will thicken them, then with a slice lay it on a cloth, make it fast to go round the pastern, and bind it fast, renewing it every day. Let him not come in any wet but stand still: some will wash it only with Gun-powder and Vinegar, which cannot but serve very well to the purpose.

*Of the Ringbone, a Disease in Horses, with the Remedy.*

**T**His is a dangerous disease; it appears before on the foot above the Hoof, as also behind: it gets into a Gristle growing about the Crouts of the feet; it will swell three inches broad, and a quarter of an inch or more of height, the hair of the beast will stare and wax thin, it will make him halt; it is hard to cure, if it be of any long growth. The Cure is to fire the sore with right lines from the Pastern to the Coffin of the Hoof, in this manner . and let the edge of the drawing Iron be as thick as the back of a big Knife, burn it so deep that the skin may look yellow, then cover it with Pitch and Rosin molten together, and lay thereon Flocks of the Horses collar: some will eat it away with Corrosives, as the Splent.

*Of the Spaven, with the Remedy thereof.*

**I**T is a very bad distemper, which will occasion the horse to halt, and that more especially in the beginning of it; it appeareth on the hinder Legs within and against the Joynt, it will be swelled and hard. Some Horses have a thorow Spaven, as

it appeareth both within and without; such a kind of Spaven is hard to be cured. Our most expert Farriers will have a Spaven to be of two kinds either dry or wet; this latter they call the Blood-Spaven. The dry Spaven is cured in the manner following. First wash it with warm water, and shave off the hair as far as the swelling is, then scarifie the place, that it bleed, take of Cantharides a dozen, and of Euphorbium half a spoonful, break them into a Powder, and boil them together, with a little the Oyle de Bay, and when they are boiling hot, with feathers anoint the sore, and tye his Tayl, so that he may not wipe it, and within an hour after set him in the Stable, and tye him so that he lye not down that night (for rubbing off the Medicine) and within a day after, anoint it with Butter; and so continue for six days, then draw the sore place with an hot Iron, take a sharp one like a bodkin, somewhat bowing at the point, and so upward betwixt the skin and the flesh, and thrust it in the nether end of the middle Line, then tent it with Turpentine and Hogs-grease molten together, and made warm, renewing it once every day, for the space of nine days; but remember that after this burning, you take up the Master-Vein, which must be done in this manner: Cast the Horse upon some straw, then having found the Vein, mark well that part of the skin that covereth it, and pull that aside from the Vein with your left thumb, to the intent you may slit it with a Razor without touching the Vein, and cut no deeper then through the skin, and that longest-wise that the Vein goeth, and not above an inch, then will the skin return again to the place over the Vein: with a Cornet under-cover the Vein, and make

make it bare, thrust the Cornet underneath it, and raise it up, and put a Shoe-makers thred underneath somewhat higher than the Cornet standing, slit the Vein long-ways, that it may bleed, and having bled somewhat from above, then knit it with a sure knot somewhat above the slit, suffering it to bleed only from beneath a great quantity; then knit up the Vein also beneath the slit with a sure knot, then betwixt these two knots cut the Vein asunder where it was slit, and fill the hole with Salt, then lay on this following Charge: Take half a pound of Pitch, a quarter of a pound of Rosin, a quarter of a pint of Tar, boil them together, and being warm, anoint all the insides of the Joynts, and clap on the Flocks of the Horses collar, and turn him to Grass, if it may be till he be perfectly whole and the hair grown again.

*Of the wet or blood Spaven, with the Remedy.*

SOME call this, as hath been said, the Thorow Spaven; it is fed by a thin flexible humour by the Mutter-vein. The Cure is to shave off the hair, and to take up the Vein on every part, and then cut the Vein asunder, and draw it with a hot Iron, charge it and put on the Flocks, and it will perfectly heal it, as I have certainly experimented.

*For any dangerous Bots or Maw-worms, the Remedy.*

THIS is a very evil Distemper, the Bots lying for the most part in the Horses Maw, where they will remain an Inch long, white-coloured, and red-head-

headed, and as much as a fingers end; they will grow quick and stick fast on the Maw-sides. This disease appeareth by the stamping or trembling of the Horse; taken at the beginning, there are Remedies enough for them; but let alone too long, they will eat through the Horses Maw and kill him. For Cure, take as much Precipitate (which is Mercury calcined) as will lie gently upon a silver Two-pence, and lay it on a piece of sweet Butter almost as big as a Hens Egg, in the manner of a Pill, then chase him a little up and down, and afterwards set him up warm, making him fast for full two hours after, and it will Kill all manner of worms whatsoever; yet in the administration, you must be very careful; for in the Precipitate there is a strong poisonous quality, therefore mix the same prescribed quantity with a little sweet Butter, as much as a Hazel-nut: Before that you lap it up in the great lump of Butter, it will be the better to allay much of the evil quality. But this I leave to your own discretion, assuring you, that there is not any thing comparable to it for the same infirmity.

*Of the Serew or Serow, with the Remedy of it.*

**T**HIS disease is like to the Splent, in manner of a Gristle, but it is a little longer and more, about the bigness of an Almond; it groweth on the fore-leg, and lieth upon the Knee on the inner side: Some Horses have a Thorow-Serew on both sides of the Legs, that Horse must needs stumble and fall, and it will be very hard to cure him. The best Remedy is, to take an Onion and to cut out the Core, and put therein a spoonful of Hony, a quarter of

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a pound of unslakt Lime, three penny-worth of Verdigrease, and roast the Onion, and bruise it, and lay it to, hot; having first cut the skin. *Præbatur est.*

*Of a Malender, with the Remedy.*

**T**HIS is a Disease that may be Cured for a time, but with ill keeping it will come again; it appeareth on the foremoſt Leg on the bending of the Knee behind: It is like a Scab or Scald growing in the form of Lines or streaks. Some Horses will have two of them on a Leg within an Inch together; they will make a Horse to stumble, and sometimes to fall. The Cure is, to wash it with warm water, and to shave the Scab clean away, then take a spoonful of Sope, as much Lime, and make it into a Paste, and spread as much on a clout as will cover the Sore, bind it fast, renewing every day for three days together; then anoint the same with Oyl of Roses, to cause the crust to fall away, then wash it with Urine, and strew upon it the powder of Oyster-shells. Another for the same: Take a Barreled Herring with a soft Row, and two spoonfuls of black Sope, half an ounce of Allum, and bruise them together, and lay it on the Sore three days.

*Of the Splent, with the Remedy.*

**T**HIS is the least disease that is, except it be the Lampas, and many undertake to Cure it, of which very few fail. The cure of it is, to wash it with warm water, and shave of the hair, and highly to

scarifie all the fore places with the point of a Razor, so as that the blood may issue forth: Then take of Cantharadies half a spoonful, and of Euphorbium as much, beaten into a fine powder, and mingle them together with a spoonful of Oyl de Bay, and then melt them in a little Pan, stirring them well together, so that they may boil over; and being so, boyled hot, take two or three Feathers, and anoint all the fore places therewith; and let not the Horse remove from the place for two hours after. Afterwards carry him away, and tie him, so that he may not touch the Medicine with his Lips: And also let him stand without Litter that day and night, and within two or three days after, anoint the Sore with Butter for nine days, and it will Cure him.

*Of the Clanders, with the Remedy.*

THE original cause of this Disease, is the Rheum, which being an abundant moisture, and naturally very cold, at length congealeth according to the nature of cold, and then proceedeth to Kernels, and so to Inflammations, which become so great in the end, that they seem to strangle the breath of the Horse, from whence it is said to have the Strangles, which by continuance of time either perish the Liver or the Lungs, by a continual distilling of putrified and corrupt matter, The signs are apparent to any man that hath any discerning, and the diversity of Medicines infinite. The beginning always of this disease, is taking of cold, after too much heat, the which cannot be avoided from a Horse that hath had too much feeding, and too great rest, more especially if his dyet be naught; or by the use of continual

nual Travel upon a full stomach, or before his body be made clean after long rest; for the standing Pool is ever muddy. The Cure is, you must take one ounce of Fennel-Greek, boylit in water till it splir, and open in two, and after that mingle it with the Decoction, and two pound of Wheat-meal, and give it the Horse to drink twice a day, keep him fasting. *Probatum est.*

*An excellent Remedy for the Haw in the Eye.*

THIS disease in the Horses Eye, is like a Gristle; the way to Cure it, is to take up the Haw with a little Ivory Needle, or Pen-knife, and then to cut it all away with your Sissers; for the only way to Cure it, is to cut it out.

*Of the Barbes, Barbels, with the Remedy.*

THEY are little Paps in a Horses mouth, that hinder him from eating. The Cure is, to clip them away, and to wash them in Vinegar and Salt.

*Of the Vives, with the Remedy of it.*

THIS disease is in a Horses eat, between the upper end of the Chall-bones and the Neck; it proceeds from the corruption of the blood: they are round knots between the skin and the flesh, like Tennis-balls, and if they are not timely killed, they will grow quick, eat the roots of the Horses Ears, and kill him. The Cure is, to draw them with a hot Iron right down in the midst, from the root of the Ear, so far as the tip of the Ear will reach, being



ing pulled down, and again under the root of the Ear, with a hot Iron draw two streaks on each side, then in the midst of the first line, Lance them with a Lancelet or Razor, taking hold of the Kernels with a pair of Pinners, so as that you may cut the Kernels out without hurting the Vein, then fill the hole full of Salt. Another Cure for the same: Take Agrimony, Hony, and Violet-leaves, stamp them together, and slit the Sinew under the Ear, and lay a Plaister thereunto for two or three days.

*Of the Muorning Chine, with the Remedy.*

**T**He cause hereof is great heat, and afterwards taking of cold; it first beginneth with a Rheum, which proceedeth to the Inflammation of the Liver and the Lungs, by the continual distilling upon them; then to the Glanders, which is the Apostumation thereof, and lastly to an Ulceration, which abruptly and untruly is called the Mourning of the Chine: The signs to know this disease, are these.

1. The continual distilling of Rheum in the Head.
2. The continual Knobs between the Jaws.
3. The keeping of the hair without casting.
4. A continual running of a thick stinking matter at the Nose, like Oak water.
5. The fastning and growing of a Knob as big as a Walnut, to the inside of one of the Jaws; which if so, commit the Horses Carcass to the Crows, for he is past all help. The Cure for such a Horse, if he be not past Cure: For the first, which is the Rheum, the Cure is what I have mentioned for the Cold in the Head. For the second Cure, I refer you to that of the Glanders. For the third, let him bleed till you see that he have fine and

and pure blood, and give him good Mashies. For the fourth, for the running of his Nose, you may add some ordinary purging Drinks, that are used for the purging of the Head. For the fifth, if you find no amendment but a Knob grown to his Jaw, then you must give him a Purge with Pills; and if these means will not help him (though he were the best Horse in the World) he is remediless.

*Of the broken Wind, with the Remedy.*

**T**He cause of this dangerous Disease, hath been but guessed at, not truly discovered by any, as not being well understood, and therefore accounted of most Horse-men Incurable. I do intend to use my best Endeavours to Unfold and Explain it: To which purpose, I will divide the same into three Kinds, every one of which may be truly termed a Broken-wind, because the breath being drawn very short and thick (contrary to the Original Institution or Creation, the which is long, cold, and quiet, for so every Creature is by Nature; but when any accident of violence of the body is used in any of them or a distemper) the signs thereof will quickly be visible, and then every mans experience telleth him evidently, that he panteth and fetcheth breath very short and thick; I therefore will begin with the Cause thereof, the which rightly understood, the Effects cannot be hid. Now the Causes why a Horse draws his breath very short, are these; as Sickness, great Fulness, violent Exercise: But the reason of the Cause is; for that the Heart being the only hottest part of the Body, from whence the Arteries or Veins do carry the heat thereof to every part



part of the Body (and therefore it is truly said to be the Chariot of Life) when the same by sickness, or violence of exercise is choaked, or as it were smothered. with too great heat, then do the Lights, being the Bellows to draw breath, according to that Office that Nature ordained them unto, presently labour with all violence to draw it, and cool and comfort the Heart, and so consequently all the members and parts of the body, to fill all the empty corners with Air, which naturally and in predominant qualities is moist; and when they have drawn sufficient breath, the dryness and heat by the moistness of the Air is quenched, which being so, then doth the Creature draw breath leisurely and coldly, and not before: but so long as the Heart is oppressed by the violent heat of sickness, or by great Fulness, or violent Exercise, the Caves, Pipes, and passages for the breath, are almost stopped and choaked up; then do the Lungs labour extream thick to preserve the Life of the Creature, which is the Heart, and therefore it is said to the first thing that Liveth, and the last that dieth: So that all things which hinder and stop the passages of the breath, breaking the natural course thereof, are the only causes of a Broken-wind. So likewise the Cure of the Broken-wind must be by removing of the stoppings of the Air, and then the Lungs will perfectly perform their Office, and the Creature will be freed from the disease. The differences of Broken-wind both in cause and effect, are divers, and yet may be termed Broken; namely, the shortness of breath, the Purick, and Broken-winded.

1. As touching the shortness of breath, it may proceed from some gross and tough humours, cleaving

to the hollow places of the Lungs, stopping the Wind-pipes, so that the horse cannot easily draw his breath; and the sign thereof is his coughing often, daily, and vehemently, without voiding at the Nose or the Mouth. 2. It may come by hasty running after drinking, or upon a full stomach, or dissolution of humors, descending into his Throat or Lungs, by reason of some violent heat dissolving the same. And the signs thereof, are continually panting, sending the same forth very hot at his Nose, in a wheeving manner, his Flanks beating so thick, that he cannot fetch breath, but by holding his Neck right out and straight: and this may be truly called a Broken Wind. The Cure is, to take a close earthen Pot, and put therein three pintes of strong Wine-vinegar, and some new-laid Eggs, with the shells unbroken, and four Garlick-heads, clean peeled and bruised; then cover the Pot-close, and set it in some warm Dunghil, and there let it stand a whole night, and the next morning take out the Eggs, but break them not, then strain the Garlick and Vinegar through a clean cloth, put thereunto a quarter of Honey, half a quarter of Sugar-candy, two ounces of Liquorish, two ounces of Anniseeds beaten into a fine powder. The horse having fasted all night, in the morning open his mouth, and put out his Tongue, and put one Egg into his Throat, and then let go his Tongue, so that he may swallow it down, then pour after it a horn of the said Drink, being luke-warm, and so all the Eggs in that manner, and all the Drink being spent, bridle him, and stop him, and cloath him very warm, and let him stand four hours, then unbit him; and if it be in Winter; give him Wheat-straw but no Hay, and

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if in the Summer time, give him Grass, and for some dayes together Mashes to drink, with some Sallet-Oyl or Hogs grease in them, and the Horse will do well; and in few days be fit for Exercise.

*Of the Gravelling of the Horse, with the Remedy.*

**I**T is a hurt will make the Horse to halt; it proceeds from Gravel and little stones that get in between the Slough and the Heart of the Foot: the cure is, to pare his Hoof, and get out the Gravel, and then stop him with Turpentine and Hogs-grease molten hot, and stoppt with Tow: have a care that he come not out of the Stable till he be well.

*Of the Lampas, with the Remedy.*

**T**His disease is in the Mouth; it is the easiest to be cured of all those that disturb the Horse: as it is only but a thick skin full of blood that hangs over his Teeth, that he cannot eat; so there needs no more to be done, but to let out the blood, and then take away the skin, and the Horse will be cured.

*Of the Accloyed, or Cloying the Foot with the prick of a Nail, with the Remedy.*

**I**T is a hurt that cometh from ill shooing, when a Smith drives a Nail into the quick, the which will make the Horse to halt: The cure is, to take Turpentine, Wax, and Sheeps Suet molten together, and poured into it.

*Of*

*Of the Colts Evil, with the Remedy.*

**T**His is a very bad disease, which proceedeth from the rankness of water and blood: it appeareth in his Scote, for they will swell great, and will not be hard. This distemper taken at the first, is thus cured; wash the Sheath clean with lukewarm Vinegar, draw out his Yard, and wash it also, then ride him to some running stream up to the belly to allay the heat: do this lustily for a quarter of an hour, and so after for three or four dayes, and it will cure him.

*Of the Pains in the Head, with the Remedy.*

**T**His is an evil distemper that befalls the head. The cure is: Take a pint of Malmsey, five new laid Eggs, a head of bruised Garlick, small Pepper, Cinnamon, and Nutmegs beaten fine; give it him to drink three days together, and let him fast six hours after.

*Of a Horse that stumbleth, which is called the Cordes, with the Remedy.*

**T**His distemper appeareth in the further Legs of the Body of the horse: it is called the Cordes, because the Corde is a Sinew that breedeth amongst the Sinews, the one end cometh down towards the Shackle-vein, and so up through the Leg, and goeth over the inward side of the Knee, and so over the Shoulder, and so along the Neck by the Weasant, and it goeth over the Temples under his Eye, and

and down over the Snout, betwixt both the Nostrils and the Gristle, there knit the length of an Almond. To Remedy is, to take a sharp Knife, and cut a slit even at the top of his Nose just with the point of the Gristles, open the slit, and you shall perceive a white string, take it up with a Boars Tooth, or a Bucks horn, that is crooked, or some Bodkin made so, and twine it about the strait, and cut it asunder; you may twine it so much, as that you may rear his foot from the ground, then stitch up the slit, and anoint it with Butter, and the horse will undoubtedly be cured.

*Of the Morefound, with the Remedy.*

**T**His is an evil disease, which proceeds from riding fast till the horse sweat, and then being set up presently in a cold place without Litter that he takes cold on his feet, and that more especially before that it appeareth in the hole under the heart of the foot, for it will grow down, wax white, and cromly like a Pumice; and also will appear in process of time on the wrinckling of the hoof, and the hoof before will be thicker and more brittle, then if he had not been more sound: nor will he tread so boldly upon the hard stones as he did before. The Remedy is, paring and good shooing, which being carefully done, he will do good service.

*Of the Enterferre, with the Remedy.*

**T**His distemper proceeds from the ill shooing of the horse; it appeareth oftentimes both behind and before, between the feet against the Fetlocks,

locks. There is no other Remedy for it but good shooing.

*Of the Scclander, with the appointed Remedy.*

**T**His distemper is in the bending of the Leg before; it somewhat like a Malander, and may be cured in the same manner.

*Of the Scab, with the Remedies.*

**T**Here is a disease amongst horses, which is called the Scab; it is a Scurfe in divers parts of the body; it chiefly proceedeth from leanness and ill keeping. It is commonly amongst horses. There is a filthy stinking Scab, which is called the Crown Scab, growing about the Coronets of the horns: the hair will stare like Hogs bristles, and be always mattering. When the hair is shaven away, you are to take a little Frankincense, Nitre, Tartar, and the Bark of Ash, Vitriol, Verdigrise, and Hellebore white and black, round Birthwort, and stamp them together with Yolks of Eggs and ordinary Ale, then after that boil them, and anoint the sore place. This Oyntment will also serve for the Scab and the fore Crupper.

*A Remedy for cut and bruised Sinews.*

Take of Tar and Bean flour, Oyl of Roses, and lay it hot to the place: of the same effect are Worms and Sallet Oyl fryed together: to the same purpose also serves the Oyntment of Worms, which you may have at the Apothecaries.

*For a Horse that cannot piss.*

Take a pinte of white Wine Vinegar, half a pound

pound of Simgreen, bruise it small, and wring out the Juice, take a handful of Fennel, and a handful of Fox-Gloves, the Leaves of the Flowers, two ounces of Gromwel-seed, and half a pinte of sweet Honey, stamp them well together, and strain them into Vinegar. Let him stand without meat and drink 24 hours. *Probatum est.*

*To bring Hair again.*

Take the Dung of Goats, and some Honey and Alum, and the Blood of a Hog, boil them together, and being hot, rub the place therewith.

*For the Stone and Collick in a Horse, the Remedy.*

Take a pinte of white-Wine, half a pinte of Bur-seed, and beat them small, two ounces of Parsley-seed, half a handful of Hop, half a handful of unset Leeks, and half a handful of Water-cresses, half an ounce of black Sope, and mingle them together, stamp and strain them, but put the Bur-seed and Parsley-seed together to it after it is strained, and then warm it, and give it him to drink.

*Of a present Remedy to kill the Fire either in Burning or Shot.*

Take Varnish, or Oyl and Water beaten together, and anoint the place with a feather.

*To ripen an Impostume.*

Take Mallow-root, and Lilly-roots, and bruise them and put them into Hogs Grease, and Linseed-meal, plaister-wise, lay it to.

*For a Wrench in the Foot-locks, or any other Joynt, that is suddenly done.*

Take of Narvil, and black Sope, and boil them to-

gether a little on the fire, and annoint with it.

*For the dangerous Galling of a Horse, an excellent Remedy.*

Take a pottle of Verjuice, two penny worth of green Copperas, boil it in a pinte and a half, and wash and search the hole therewith, and fill with red Lead, and let it remain three days untouched, then wash it with the same, and fill it again with red Lead. This will heal it, though it be galled to the body.

*Of Warts in general, and of the Spongy Wart, with the Remedy.*

**T**HERE is a distemper that some Horse-men will neither allow to be either a disease or hurt, and that is, if a Horse want V Varts behind, beneath the Spaven place: for then he is no Chapmans V Vare, if he be wild: but if he be tame, and have been ridden upon, then *caveat Emptor*: Let the Buyer beware that he hath both his eyes to see, and his hands to handle; there is a Saying, That such a horse should dye suddenly when he hath lived as many years as the Moon was days old, or such time as he was foaled. But to pass over this light digression; there is a V Vart which is called Spongy. The Cure is, if it be long enough, to tye a thred about it, and it will eat off, or else to take it off with a hot Iron.

*To help the Surbaiting, or Soreness of a Horses feet.*

**W**HEN you find your Horse to be Surbaited, presently clap on each of his Fore-feet

*R. I.*

*two*

two New-laid Eggs, and crush them therein, then upon the top of them lay good Cow-dung: Thus stop him for four hours, and he will recover.

*For a Wrench, or Strain in the Pastern.*

Take a quart of Brine, and scethe it till it be ready to boil over, and then strain it, and put into it a handful of Tansie, a handful of Mallows, a Sauter full of Hony, a quarter of a pound of Sheeps Tallow, beat them together, and set them on the fire until they are well sodden, and then lay it hot to the Tent, and sew a cloth fast about it, and so let it rest five days, and it shall cure him.

*For a Back Sinew-Strain, or any other Strain.*

Take an ounce of Turpentine, and two or three Spoonfuls of Aqua Vitæ, and beat them together, till they come to a perfect Salve, then anoint the Strain very well therewith, and heat it either with a hot Brick, or Bar of Iron; and thus doing three or four times, it will take away the strain.

*For a frothy Hoof.*

First with an Instrument, make hollow the Extremities of the Hoof on the out-side, till the principal Vein break; let all the blood come forth, then fill up the hole with fine Salt, and Aurds steeped in Vinegar, and then bind them, so that they shall not fall off. This is the sure way to make a hard and sound Hoof.

*Of the Attaint.*

It is a distemper that proceeds from an over-reaching before; and if it be behind, it is the treading of another Horse, which every ordinary Farrier knows how to Cure, and therefore we shall wave it.

Of

*Of the Mourning of the Tongue.*

I shall pass over this Distemper as it is held Uncurable.

*A Remedy for a Pinch, or a Gall in the Withers.*

First cut out the dead flesh, and make a Tent with the White of an Egg, and then wash the part with warm White-wine, and afterwards anoint the fore place with white sweet Suet.

*A present Remedy for the Staggers.*

When you find your Horse distempered in his Head, then take a piece of woollen Cloth, and bind it fast to the end of a stick, being well rubbed with good Barbary Sope, and then put it into both his Nostrils, with as much ease as you can, and it will draw it forth very gently again: This is a perfect Remedy.

*An excellent Remedy for the Strangles.*

When you first see the Strangles growing, prick them under the Throat in the Morning, and after cover the Horses head with a Linnen-cloth, and then rub him often under the Throat, with fresh Butter, on the sore place, and it will Cure him.

*A Remedy for the swelling of the Cods.*

Take strong Vinegar, white Chalk, well powdered, stir it well, and make a Paste, anoint the Cods of the Horse three or four times a day, and in few days it will cure him.

*A Remedy for the Mattering of the Yard.*

Take a pint of White-wine, boil therein a quart of Roche-Allum, and with a Squirt thrust it very far into his Yard; squirt the same some three or four times, to pierce and cleanse the bottom from the filth, and thus continue until he be whole.

*An excellent Cure for the Tetters.*

Before you meddle with the place, first draw blood from his Legs, and then strike the Veins of the Legs on the out side, and on the in-side, but not on the place where the Hoof comes forth, then wash the place with White-wine, and mingle the Juice of Prunella with powder of Galls and clear Water, and with this Liquor, beat the Hogs-grease and liquid Pitch, that all become like Hony, and having so done, anoint the Tetters, and in six times dressing it will be Cured.

*A rare Medicine for a sore Back, be it never so wrung with a Saddle.*

Take of Sheeps Dung to the quantity of three parts of your Plaster, and the fourth part of dry Wheat and Rye-flour, and mingle them well together, and let them boil a quarter of an hour in good fair water, and then lay it on warm, and at two or three times applying, it will Cure the Back: This is a tried and approved Plaster.

*For the Botch in the Groyns of the Horse.*

The Cure is, to take of Wheat-flour, Turpentine, and Hony, of each a like quantity, stirring it to make a stiff Plaster, and to lay it to the Sore to break it, and then Lance it: Tent it with Turpentine and Hogs-Grease.

*A Remedy for the Lax.*

Take of Bean-flour, and Bole Armony, of each a quartern, mingled in a quart of Red-wine, give it him Luke-warm, and after it, let him drink warm water, with Bean-flour; but if that will not stay him, then give him half a penny worth of Allum beaten into powder, and Bole Armony beaten small, in a quart of Milk, stirring them till all the Milk be of

of a Curd, and this will stop him.

*A Remedy for the Costiveness, or Belly-bound.*

Take of the Decoction of Mallows, a quart, put to it half a pinte of Oyl, so much Butter, an ounce of Benedict Laxative, and pour it into his Fundament with a little Horn, and hold his Tayl close to his Fundament, whilst another doth lead him, and so keep it in him as long as you can, and after keep him warm, and give him warm water to Drink.

*An excellent Remedy for the Yellows.*

The cause thereof, is the abundance of bad humours; the Cure is plain: Let him bleed, if you see it yellow, a pottle, then give him a quart of White-wine, of Saffron and Tamerisk, of each half an ounce, and the Juice that is wrung out of two handfuls of Selandine; let him take it blood-warm, and keep him warm, and with good Mashies, wherein put two spoonfuls of the powder of Brimstone. Some will give him in this Drink the green Ordure of Geese strained.

*A Remedy for the Swelling of the Gums.*

The Cure is, to make him to bleed well in the Palate of the Mouth, and also to scarifie the rank Gums, that the blood may come out, then rub them soundly with Vinegar and Salt.

*A Remedy for the Rists and Corruption in the Palate of the Mouth.*

Take sharp Vinegar and Salt, and wash the same, and then anoint it with Hony. For the Lampas and Bladders in the Mouth (as we have said) every Smith can cure it.

*A certain Remedy for the Cane in the Mouth.*

This distemper proceeds from the eating of filthy

Hay, that Cats, Dogs, and other Vermine have pissed upon, which will cause the Horses mouth to be clammy and furred, so that he will not eat. The Cure is, to let him blood in two great Veins under the Tongue, and to wash his mouth with Vinegar and Salt, and to give him new Bread that is not hot.

*A Remedy for the Heat in the Mouth.*

Turn up the upper Lip, and jag it with a Lancet, that it may bleed, and wash it with Vinegar and Salt.

*A Remedy for a Cold in the Head.*

The cause proceeds from some heat, or standing too much still, or from having some Air piercing his head when he is hot, or by some humours congealed after long rest, and full feeding, and through the want of exercise to expel the same. The signs are a continual distilling Rheum, waterish Eyes, or his short drawing of breath at the Nostrils, when the Caves and Passages of the breath are ill stopt. The Cure is, put upon his head a double hood, and every morning ride him when he is fasting; take two Goose-feathers dipt in Oyl of Bay, and thrust them up into his Nostrils, through the ends whereof with a Needle, put two threads to fasten the same to the Head-stall, so that the feathers may not fall out, and to the Snaffle and Bit that he is rid with, fasten a Root or two of Polypodium of the Oak, which hath been steeped all night in Spike-Oyl, and every time you ride him, anoint the same with the same Oyl, and when he cometh home, put on his head the double Hood, and perfume him hot with Frankincense, casting a cloth over his head: Use him thus nine days together, and give him warm water or good Mashcs, during the said nine days;

days; for the Rheums of continuance are very dangerous, and many times remediless, leaving behind them a worse disease than themselves.

*An excellent Remedy for the Canker in the Mouth.*

Wash the Mouth with strong Vinegar, made thick with the powder of Allum, two or three days together, to destroy the Ulcerate matter; then take a quart of fair water, of Allum four ounces, of Hony four or five spoonfuls, and Maudlin-leaves, of Sage-leaves, and Columbine-leaves, of each a handful; boil all these together till half be consumed, and then every time being warmed, wash the same two or three days, and it will heal it.

*Of the Lousie Disease.*

There are Horses that will be Lousie; this distemper of theirs proceeds from too much leanness, cold, and ill-keeping: It is most commonly amongst young Horses. We shall not insist upon the Remedy of it, as it is so familiarly practised by every Smith.

*Of the Repairing of a broken Hoof, that it may grow.*

Take of Garlick-heads seven ounces, of Herb Grace, three handfuls of Allum beaten and sifted, of Barrows Grease that is old, two pound; mingle all these with Asses Dung, boil them together, and anoint the Hoof therewith.

*A certain Remedy for the Fretting of the Guts.*

Take in the morning a quart of good Ale, and four ounces of Fenugreek, seven ounces of Bay-berries, as much Long-Pepper, an ounce of Ginger, two ounces of VVatercresses, an handful of Sage, another of Mints; beat them together in Ale, then strain it, and give it him blood-warm, rope all his Legs, and tie him so, that he lie not down; put him into a

sweat, keep him hot, give him no cold water for three dayes after, feed him with dry Beans and Oats, and the horse will recover.

*Of pulling out of Shivers or Thorns, and of Swelling.*

The Cure is, to pull them out, if they may be seen; but if there be such a swelling, that they cannot be seen, then take VVormwood, Paretoory, Bearsfoot, Hogs-grease, and Honey, boil them together, and being hot, make a Plaster. It is an excellent Remedy for any swelling, so also is V Vine-lees, V Wheat-flour, and Cummin boiled together, and when it is at a head, lance it.

*Of the Strangullion.*

It is an easie disease to cure, but the horse will be sore sick with it; it proceeding from a chafing heat, that will make him sweat, and afterwards it will rise and swell in divers parts of his body, as big as a mans fist: It will break of it self, if it be kept warm.

*Of Blindness.*

A Horse will be blinded with too much labour: This distemper, if it be young and taken betimes, is best cured by giving of him ease.

*Of the Foaling of the Yard, with the Remedy.*

The Cure is, to wash the same with warm white V Vine, and anoint it with Oyl of Roses and Honey mingled together, then put it up with a Cod-piece of Truss, keep it up still, and dress him every day once till he be whole.

*Of the Millets, with the Remedy.*

This distemper appeareth in the Foot-locks behind; it causeth the hair to shed three or four inches in length, and a quarter of an inch in breadth, like as if it were bare. It is seldom or never cured, but  
a horse

a horse may live, being purged with ordinary Purges, for a long time with this distemper.

*An excellent Remedy for the Stringhalt, or any old Strain or Lameness in the sinewy Joynts.*

Take Boars Grease, Bole Armoniack, black Sopc, and Nerve-Oyl, of each a like quantity, boyl them all together, and then apply it hot to the grief, rubbing and chafing it, and also heating it very well, either with a hot Brick, Brick-bat, or hot Fire-shovel: Thus do once every day, until the pain be gone. The Stringhalt is a distemper which maketh the horse to twitch up his Leg; it proceeds for the most part from a cold: it seldom appears outwardly.

*A Remedy approved for the Hide-bound, by some improperly called the Affreyde.*

The cause thereof is a sudden cold after a great heat; when the Pores are open, the cold entreth, and maketh an attraction of the Sinews, so as that the horse seemeth to go or travel with great grief, his skin being as it were starched, shrunk, and clinging to his Ribs. The Cure is, to let him blood in both the Flank-veins, being next the girding place and the Flanks; then take a quart of white V Vine, and put therein three ounces of Sallet-Oyl, and of Cummin one ounce, of Anniseeds two ounces, Liquoris two ounces beaten into powder, and give him warm, then let him be rubbed half an hour together; cover all his Back with a Sack thoroughly soakt in a Tub of water, and the water wrung out and upon that cast many cloaths, and gird them fast unto him to bring him to sweat, which is the only and chief thing to recover him; then keep him with good Mashcs, and every day let him be so used for seven or 8 days together, give him sodden Barley and Beans



Beans for his diet, and green Mault on the floor, and after the eight days, let him blood in the two Breast-veins, about a pinte; then give him to the quantity of a pinte and a half of Sack, and a quarter of a pinte of Sallet-Oyl, four penny worth of the best Treacle; ride him until he sweat, then presently set him in a warm Stable, and keep him hot: at night give him a good Mash of Mault, with the powder of Brimstone, to the quantity of two spoonfuls.

*A Remedy for the Hurt of the Tongue with a Bit.*

The Cure is, to wash it with Allum water, then take black Bramble-leaves, and chop them with Jard, and put them within a clout, and make them as round as a Ball, then dip the same in Honey, and annoint the Tongue therewith until it be whole.

*A Remedy for the Giggs in the mouth.*

They are swellings with black heads growing on the inside of the Lips. The Cure is, to slit them, and thrust out the corruption, and to wash the same with Vinegar and Salt.

*An excellent Receipt to fatten a Horse.*

This way I have experienced, and found it to be good and certain: Take of Elicampane, of Cummin-seeds, of Tamericks, of Anniseeds, of each two ounces; of Groundsel a handful: boil all these very well with three heads of Garlick, cleansed and stamped in a Gallon of strong Ale, then strain it well, and give the Horse a quart luke-warm in the morning fasting, then ride him till that he be warm, set him up hot. Thus do for four or five mornings, then turn the horse to Grass (if it be a fit suitable time of the year) and he will feed heartily. But if the time of the year serve not for Grass, then you must keep him in the House, and over and besides the  
Drink

Drink before prescribed, you must take fine powder of Elicampane, and the fine powder of Cummin-seeds, of each a like quantity; mix them well together, then every time that you give your Horses Provender, which should be thrice a day, in the morning, noon, and night, take half an ounce of this powder and sprinkle it by little and little, and a little into his Provender, for fear he should nauseate it, until it be all eaten up. And thus do for fourteen dayes together at the least, and you shall see the Horse prosper in a wonderful and strange manner.

*An excellent Remedy against a Horses surfeiting with Provender.*

When a Horse hath eaten more than his stomach can well digest, he is in much pain, so as that he is not able to stand, but lyeth and walloweth as if he had the Bots. The Cure is, to let him blood, and to draw his Yard and wash it, put a piece of a Clove of Garlick into it, to make him piss: give him also a Clyster with the water of sodden Mallows, fresh Butter, and Sallet-Oyl; keep him warm, and let him eat very little for four or five days.

*These following things are most excellent to put into a Horses Provender, to preserve him from Diseases.*

The powder of Wolfes Liver, the powder Eula Campana, the powder of Polypodium of the Oak; fine cut pieces of Rhubarb, the powder of Brimstone made fine, the powder of Liquoris, Aniseeds, Fenugreek, Turmeric, Bay-berries, long Pepper, Agrimony, Chamomil, Wormwood, Savin, Linseed, Smallage, Parsley, Rue, Hyssop, Coltsfoot, Horehound, and such like,  
Of

*Of the Catarrh in Hogs, with the Remedy.*

It is a Rheum which makes their Eyes to water, and a moisture to ascend up into the Head, which breedeth a corrupt matter, somewhat of affinity with the Plague. It seisseth upon them for the most part from their eating of too much fruit that lyes rotten under the Trees. For this distemper Marsh-mallows are excellently good mixt amongst their meat.

*Approved Cures for a Hog bitten by a mad, or by other Dogs.*

If he be bitten by a mad Dog, take of strong Chamber-lic, and mix it with Bay-Salt and Soot, and put therein an Addle-Egg, or two, then beat them all together, and make it boyl a little, then rub the place as hot as he may well endure it without scalding, with a stick, and a clout tied to the end of it. Use this twice or thrice, and he shall do well. But if he be bitten by other Dogs, that he is like to come by an Apostume, to avoid the danger thereof, you must wash his Wound betimes with Stale, Salt, and Nettles bruised, or Vinegar and Mallows boiled together, and some Hogs-grease put thereunto, and therewith bathe the Sore; then anoint with Tar, and fresh Grease mixed together, and he shall do well.

*An approved Remedy for the Staggers, or stirring Disease in Hogs.*

The Cure is, to put Sea-bur-Knob in the Roof of their mouths; cut it, and let it bleed, and take the powder of Lemmon and Salt, and rub it therewith, then let them have a little Stale, and they will recover.

To

*To make a Hog to Scour.*

Give him smoaked Barley in the straw, as it is also stewed for the wethering of a Cow to help her.

*Of the Lethargy in Hogs, with the Remedy.*

If this disease come, the Hog-herds shut up all their Hogs together in one House, and let them there remain a day and a night together without any meat or drink. The next day after give them water, in which is stamped the Roots of wild Cucumbers. And as many as have drunk thereof, will begin to vomit, and afterwards by Vomiting, are purged and cleared from the distemper.

*A Remedy for the Lask in Hogs.*

Give them dried Beans, beaten Savil, mixed with Broom.

*To kill Maggots in Hogs.*

If they breed in the Ear, or otherwise, in any hollow place under the skin, you must take the Juice of Hemlock, and pour it into the hole, and it will kill them, or else they will immediately void them of a great bigness.

*An approved Remedy for the Disease in Hogs, called the Milt.*

The Remedy is, by making them Troughs to feed out, of a Wood in Latine called *Tamerix*, which in English is called Quick-Beanwood, out of which will come such a moisture, that it will heal the Inflammation of the disease; for sometimes there proceeds such an Inflammation from the Milt, that it breeds a Pestilence.

*To cure Hogs that have eaten of poysonous Herbs.*

Such as Henbane, and Hemlock; to cure them, you must give them the Juyce of Cucumbers warm-  
ed.

ed, the which being drunk, will cause them to vomit, by which they cleanse their stomachs, and recover their healths again. There are two other Herbs, the Camelion Thistle, and the Goose-foot, which are death for them to eat.

*To cure the Apostumes under the Hogs Throats.*

When they have Apostumes and Kernels under their Throats, they ought to be let blood under the Tongue, and when that you have drawn blood sufficiently, you must Rub and Chase all his Throat and Groyn.

*An approved Cure of the Garget in Hogs.*

This is a dangerous disease, that many of them die of; it is a Swelling and Inflammation of the Throat, behind the Jaws of a Hog. I cannot be acquainted with any other Remedy; for it is but this, that they use to slit it in the midst, as long as the Inflammation or Sore is, and then to flay up the skin on both sides of the slits, and so far as the sore is, rub it with Nettles and Salt, and lay Tar upon it, and he shall recover.

*A Remedy, together with a Bath for a Swine that hath the Swine-Pox.*

For the Cure, give them the powder of Brimstone with some Salt. A Bath to wash them, is as follows: Take Yarrow, Plantane, Primrose-leaves, Bryar-leaves, old Oaken-leaves of a year, of watry Bettony, of each two handfuls: Boil them in two Gallons of Running-water, till that they are tender, and then wash your Hogs and Pigs therewith, and use this once or twice, and it will drie up.

*A Remedy for Lousie Hogs.*

This disease comes to them from Leanness, and want of good keeping in Winter; for so long as they

they are Lousie, they will not thrive. The Remedy is, take Quick-silver, and kill it with Sallet-Oyl and Fasting-spittle, then mix therewith fresh Grease, or Neats-foot Oyl, and so anoint them all over.

*Preservatives against the Meazles, with the most approved Cures of them in Hogs.*

To keep and save your Hogs from being Measled, take this course: You shall use in the summer, especially in the Dog-days (which last from the midst of July, to the middle of August) to give them amongst their Wash and other Meat, chopped cold Herbs, of Lettice, Endive, Succory, Violet-leaves, of Dandelion, Sow-thistle, or Sumitors, and such like, chop a quantity of these amongst their Meat, to keep them cool. Another is, to take a quart of stale Piss, or Mens-Urine, that hath been kept very long, and therein put a good handful of Black-sope, stir and mix it well together with the Piss, then put therein a quantity of Whey, force the Hog, if he be nice, to drink it. Let him rest two or three hours after it, and then give him some other meat, not much: And so let him rest without any other sustenance until the next morning, for a weeks space or more, as you shall have cause, and you shall see this Experiment made good.

*To fatten Sheep.*

All things will fatten Sheep, which are mingled with Salt-water, as Vetches, Bran, Chaff, and such like.

*To make the Wool to come again.*

If the Wooll of the Sheep after they have been scabby, do fall off (as in some places the Wooll will go clear off:) To make it grow again, and supply

ply the same place, grease them with Butter mixed with Tar, Oyl, Goose-grease, or fresh Grease; for Tar alone is too sharp, a fretter and a whealer, without it be mixed with some of the aforesaid Ingredients.

*Of the Red-water, with the Remedy.*

This is a certain Bladder with water under the tip of the Heart, which scalds and consumes the Heart, and at length will kill the Sheep. The best help is for some nights to chase them with a Dog, which will preserve them from the mischief of this Distemper.

*An excellent Remedy for the Cough of a Sheep.*

You must give him in the morning with a Horn, a little of sweet Almonds, mixed with a little white-Wine. Let him take it warm; let him have new straw, and make him to eat of the Colt-herb, growing on Lands: Some call it Horse-hoof.

*Of the cloven Pesil.*

There is no other Remedy, when he is a Lamb, but to keep it clean till it be bigger; anoint him with Tar, and when he is in reasonable case, kill him, for there is no Cure for it.

*A Remedy for the Flegme.*

Put the tender tops or branches of Savory into their Nostrils, or Basil into their Noses, which will cause them to sneeze, but you must close their Eyes. You must also take of the Juice of Briony, with Honied water.

*To kill Maggots.*

Take Oyl of Olive, and the powder of Brimstone, and so anoint therewith; or of the powder of Brimstone and Tar, mixed together, and warmed over a soft fire.

A

*A Remedy for the Water in the Belly or Head.*

Stamp and strain of Two-penny Grass, and give it him in boiled Wine. Against any water in the Head, boil Purslane in honied-water strained, and so give it him.

*For the Worms in the Guts, the Remedy.*

Take a quantity of the Juyce of Horehound, with some Leek-blades, and bruise them, and so give it to him, and it will help him.

*Of the Tin-worm.*

It is a small Red Worm, with many Legs, much like to a Hogs Louse, they creep in the Grass: If Sheep, or any other Cattel do eat one, they will swell, and within a day or two die, if they are not Cured. To effect which, take a quantity of Stale and Salt, and stir them together, and give it him so, chase him a while after: Or give him the Juice of the Herb Robert, and it will recover him.

*A Remedy for the Looseness of the Teeth.*

For the Cure, take the tender Crops of Bryars, called the Black-Bryar, and put it amongst his meat, and his Teeth will fasten again in the eating thereof.

*A Remedy for the Flowing of the Gall.*

Give him half a spoonful of Aqua-vitæ, mixed with so much Vinegar, and let him blood under the Tayl, and he will mend.

*A Remedy for the Choler in Sheep.*

'Tis cured by giving the stale Urine of men.

*A Cure for the Lousie in Sheep.*

Take Quick-silver killed in Oyl-Olive, or Spittle, and therewith anoint him.

*Of the Wild-fire.*

This is a disease counted Incurable; the Shepherds

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herds

herds have no other way but to keep the Sheep warm, and to nourish him with Goats-milk, the which will mitigate the distemper of the violence of the fire.

*A Remedy for a Sheep that hath lost her Quide.*

If a Sheep hath lost her Quide, notwithstanding she will eat all the day, and cast it up in the night again (which casting will be like to the Paunch of a Beast) for she cannot digest it, but pine away by little and little: For the Cure, you must take Quide-wort that groweth amongst Corn like to Ground-sel; bruise a quantity thereof, and then mark when you do see another Sheep chew the Quide, and take part of her Quide out of her mouth, and mix it with the bruised Quide-wort, and roll it together, and so give it, make her swallow it, and she will do well.

*An excellent Cure for the Staggers in Sheep.*

Take of Long-pepper, of Liquorish, of Ani-seeds, of Hemp-seeds, and of Honey, of each a penny-worth; heat all these together, and put therein a Pottle of new Milk, and stir the Honey and it with the rest altogether, and thereof give to each Lamb, or Sheep two spoonfuls, or somewhat more lukewarm, and this will cure them.

*Useful Preservatives, when the Pestilence rageth amongst Sheep.*

If it please God that all your Cattel are sick, first you must change your Pasture, and your watering places, and drive your Cattel further off into other Pastures. If the Pestilence or Murrain rush violently on them with great heats, you must have them to coverts, shades, and cold places. If it pro-

proceed from cold, you must have them into open places against the Sun, you must drive them very softly, keeping them in a kind of gentle exercise, yet not to let them rest and lie too much. And when that you have brought them to the appointed place, you must part them into many Troops and Bands, and there let them be carefully lookt to.

*A Remedy for the short Breath and Purfie.*

You must cut their Ears, and change their Pasture, also slit their Nostrils: Some hold it necessary to give them Anniseeds, Liquoris, and Sugar-candy; all finely beaten together, and mixed with old Grease, or of the powder of Juniper-berries, administered to them with the Juice of Angelica, with a Horn, in Wine or Water is excellently good.

*To help the Wethering of a Sheep.*

Stamp the Leaves of Mallows with strong Ale, and give it to the Ewe, and she shall do well; the Juice of Mugwort will do the like.

*A Remedy for the Turning Disease in the Sheep.*

This distemper causes them to hold their heads on one side; if she hold her head on the right side, you must strike off the Horn on the left side; for under the Horn there is a Worm which you must anoint with Tar, then bind a cloth on it, and the Sheep will recover.

*For the Jaundies.*

The stale Urine of men, is accounted the best Remedy.

*A Remedy for the Water in the Belly of a Sheep.*

You must cut a hole in the Belly of the Sheep, put in a feather, and let out the Water, and stitch it up again.

*A Remedy for the Water-bladder under the Chin.*

If you feel it, you shall find it soft; there is no other way but to Lance it a little, and then to Tar it.

*A Remedy for the Lung-sick, or Purfiness.*

Stamp Lungwort, and strain it in a little Honey-water, and give them of the Juice of Carduus Benedictus, called by some Sow-Thistle mixt with warm Ale, and it will by Gods Blessing cure them.

*To cure the Glanders or Snivel.*

If this disease continue upon the Sheep two days, the best way will be either to separate him from the rest, or to kill him. Some use for the Remedy, to take a stick, and therewith to take out all they can get out and so to make the sheep clean, when any occasion is, upon which he will somewhat recover. Others give them the Juice of Bettony with honeyed water, and the Herb called Bucks-beard, which groweth higher than that which in Latine is called *Picnomenon*. This Herb stamped and given with Wine, is marvellous good against cold or flegm in any parts of their bodies.

*To cure the Itch or Scab in Sheep.*

Anoint with Goose-grease and Tar mixed together with the tender Crops of Broom in May, stamp and boil them with Goose-grease, put Tar to them with a like proportion, then make two shends on both sides of his Backbone, from his head to his tayl, and anoint with the aforesaid Grease, and you shall need no more anointing. There is a scabbiness also amongst Lambs, being half a year old, towards Winter, or the next Fall of the Leaf; (the Shepherds say) the cause is, for that the Rams at that time are scabby that year, and that then all the Lambs

Lambs shall be scabby at the next Fall. To heal this distemper, you must grease them with Tar mixt with fresh Grease, or Neats-foot Oyl, or Goose-grease. There is another scabbiness which happens sometimes on the Mousels of the sheep, and that proceeds from the place where there is great plenty of Furs and Grose, they by the eating of the tops and flowers thereof, do prick their Lips and Mousels, from whence come scabs, which you must heal by anointing them with fresh Butter. There is another scab which they have, which comes through the negligence of the Shepherds, when they suffer them to feed on the Grass covered with Dew. To remedy this, take Salt and Hysop, a little quantity beaten together, and therewith fret and chafe the Palate of the Mouth, the Tongue, and all over the Mousel, and they will be cured.

*An excellent Remedy for the Giddiness in Sheep.*

This distemper proceeds from a Bladder in their heads, you shall find it soft under your finger, and there you must cut it. For any other pains or Giddiness of the head, these following Remedies are special good: Take the Juice of Ivy leaves, and put thereof into his Ear, and bind or close it, so that it may not be cast out, or the Juice of wild Thyme stamped with Ale strained and given him.

*Approved Remedies for the Haw in the Eye, and other Distempers of the Eyes.*

Drop into the Eye, Juice of Chamomil, or Crows-foot Herbs, stamp and laid to. Against any hot cause or pain of the Eyes, to let the Juice of Dragon Herb, or the Juice of Lettice lye to it plaisterwise. For a cold cause, take the Juice of Clary

mixed with Honey, and drop it in. Also the Juice of Pimpernel put into the Eyes, and laid to, will break and kill every Haw or other Apostumes in the Eyes.

*Of a stop in the Teats.*

There is sometimes on Ewes Teats a certain small Mote or Scab with a black head, hanging unto it a hard watry string like slegm, which is within the Teat, which will stop her Milk: Therefore the Shepherd must have a preventive Cure in lambing time.

*How to set and see over the Sheepfold.*

**T**He best time to set over the Sheepfold is in *May*. Let it be set upon Rye-ground, if the Husbandman or Sheperd have any, and to slit it every morning or night; and in the morning when he cometh to the Field, let him not take out the sheep presently, but raise them up by degrees, and afterwards let them stand still a good while, that they may dung and piss. And let him go amongst them, to see whether any of them have the Mathes, or be scabbed, and let them see and peruse them three or four times upon the one side, as often upon the other side. And when that the Kells are gone beside the ground, then may they be let out of the Fold, and then let him drive them to the soundest place of the Field. But he that hath a fallow Field separate to himself, let him occupy and possess no Fold; for folding of sheep maketh them scabbed, and breedeth Mathes: and when a storm of ill weather comes, they cannot flye nor go away, which must very much abate them of their flesh. But let  
that

that Husbandman that hath several fallow Fields, drive twenty, thirty, or forty stakes, according to the number of the sheep, upon his fallow where he would set his Fold, and that more especially in the furthest East part of the Field, from thence as they came in, for their going upon the Ground doth much good: and let the Shepherd bring his sheep to the stakes, and the sheep will rub themselves on the stakes. And let the Shepherd walk about them till they are set, and so order them for two or three nights, and they will follow those stakes as he flitteth them, and set by them. And if any ill weather comes, they will rise up, and go to the Hedge: This manner of folding shall keep them from breeding of Mathes and Scabs, or in the least manner abate of their flesh; it will also preserve them from rotting. In the morning let the Shepherd put them out of their Pastures, he shall not need to have any Hurdles or Sheepflocks.

*What time of the year the Rams should be put to the Ewes.*

**A** Husbandman (as I have already said) cannot so well thrive of his Corn, except he have other Cattel, nor by his Cattel without Corn; for otherwise he should be a Buyer, a Borrower, or a Begger: and because that sheep, in my opinion, are the profitablest Cattel that a Husbandman can have, I shall discourse the more at large of them. It will therefore first be a necessary thing for the Husbandman or Shepherd to know what time he shall put the Ram to the Ews. In this particular I must make a distinction; for all times are not alike to put to the Rams, for upon the mistake of time,



there may be a great damage or loss; for that man that hath the best Sheep-pasture for winter, and some springing in the beginning of the year, he may suffer his Rams to go with his Ews all times of the year, to Blissom or ride them when he will: but for the common pasture, it is time to put to his Rams at the Exaltation of the Holy Cross, for then the Buck goeth to the rut, and so would the Ram. But for the ordinary Husbandman that hath no Pasture but the common Fields, it is time enough at the Feast of *St. Michael* the Archangel. And so for the poor Husbandman of the Peck, and such others, that dwell in hilly or high ground, that have no Pasture nor common Fields, for their *Simon and Judas* Day will be a very good time; and the reason is this: An Ew goeth with Lamb twenty weeks, and uses to yeare her Lamb in the twenty first week; and if she have not convenient new Grasse to eat, she will want Milk for her Lamb, for want of which there are many Lambs that perish and are lost, that through the leanness of the Dams, and their want of Milk, are forced to forsake their Lambs, so that in some hard Countries oftentimes, they both dye.

*To make an Ew to love her Lamb.*

**I**F the Ew have Milk, and will not love her Lamb, put her into a narrow place made of Hordes or of smooth Trousse, a yard wide, and put the Lamb to her to suck it; and if the Ew strike or smite the Lamb with her head, bind her head with a Hay-rope or Cord to the side of the Pen, and if the Lamb will not stand side-long, call the Ew, and give her a little Hay, and tye a Dog by her, that she may see him;  
and

and this fright will in a short space cause her to love her lamb: and if he have a Lamb dead, whereof the Dam hath much milk, slay the Lamb, and tye that skin upon another Lambs back that hath a weak Dam with little milk, and put the good Ew and that Lamb together in the Pen, and in one hour she will love the Lamb; and then he may take the weak Ew away, and put her in another place, and by this means he may save both hers and the Lambs life.

*At what time Lambs should be weaned.*

**I**N some places they never sever the Lambs from the Dams, which is for two causes; one is, in the best pasture, where the Rams go away with their Ew, there it needeth not; for the Dams will grow dry, and wean the Lambs themselves. Another cause is, he that hath no sound pasture to put his Lambs into when they should be weaned, he must either sell them, or let them suck as long as the Dams will suffer them. It is a common Saying, That the Lamb shall not rot as long as it sucketh, except the Dam want meat. But he that hath several and sound pastures, it is time for such a one to wean his Lambs when they are sixteen or eighteen weeks old at the farthest, and the Ew shall again the better take the Ram. And the poor man of the Peck Country, and such other places where they use to milk their Ews five or six weeks, &c. spoil their Lambs, so as that they are never so good as those that suck long, and have meat enough.



*To draw Sheep, and to sever them in  
divers parts.*

**W**Hen the Grasier hath many Sheep in his Pastures, it will be convenient for him to have a Sheepfold made with a good Hedge or a Pale, the which will easily receive all his sheep that go in one pasture in a dry place, and adjoyning to the end of the same, let him make another littel Fold that will contain ninety sheep or more, and both these Folds must have either of them a Gate into either pasture, and at the end of the Fold let him make another little Fold that will receive forty sheep or more, and between every Fold a Gate. And when the sheep are in the great Fold, let forty of them or thereabouts, come into the middle-fold, and stake the gate, and then let the Shepherd turn them, and look on every side; and if he find any sheep that needeth any help or cure for any cause, take that sheep with his Hook, and put him into the little Fold. And when that he hath taken all that need any curing, then let him put the other into whether pasture he pleases, and let as many in of the great Fold, and take as many in as need any handling, and put them into the little Fold; and thus go them all over, till that he have done, and then let him melt Grease, and handle all those that he hath drawn, and then shall not the great Flock be tarried and kept from their meat; and when he hath cured them, let him put them into their pasture.

*To meddle Tar.*

**L**Et the Shepherds Tar be medled with Oyl, Goose-grease, or Capons-grease; these three are the best: For they will make the Tar to run and spread abroad. Butter and Swines grease, when they are melted, are good, so that they are not salt, for Tar of it self is too sharp, it is a fretter and no healer, without it be medled with some of these.

*To make Broom-Salve.*

**A** Medicine to salve poor mens Sheep, that think Tar too costly, (the worth of which, if some of the Richer sort knew, they would make use of it.) Let the Shepherd take a shere full of Broom, Crops, Leaves, Blossoms and all, chop them very small, and then seeth them in a Pan of twenty Gallons with running Water, till it begin to grow thick like a Jelly, then let him take two pound of Sheep-suet melted, and a pottle of old Piss, and as much Brine made with Salt: Let him put all into the said Pan, and stir it about, and then strain it thorow an old Cloth, and put it into what Vessel he will. And if his sheep be not Clipped, then let him make it luke-warm, and then wash them therewith with a Sponge, or a piece of old Mantle, or of a folding of such soft Cloth or Wool, for spending too much of his Salve. And at all times of the year he may use it as he shall have occasion. Let him make wide sheds in the wooll of the sheep, and anoint them with it, and it will heal the scab, and kill the sheeps Lice, neither will it hurt the Wool in the sale thereof.

of. And those that are washed, will not be scabby again, if they are well fed; for that is the best Grease that the Shepherd can grease the sheep withal, to grease him in the mouth with good meat, which is a great preservation of sheep from rotting, except there come Mildews; for a sheep will chuse the best, if he have plenty.

*To grease Sheep.*

**I**F any sheep be Leaved, the Shepherd may perceive it by the biting, rubbing, or scratching with the Horn, and most commonly the Wool will rise, and be thin or bare in that place. Then let the Shepherd take him, and shed the Wool with his fingers there where the scab is, and with his finger let him lay a little Tar thereupon, and strok it in length at the bottom of the Wool, that it be not seen above, and so let him shew the Wool, and lay a little Tar thereupon, till he have passed the sore, and then it will go no further.

*To belt Sheep.*

**I**F any Sheep Ray, or be filled with Dung above the Tayl, let the Shepherd take a pair of shears, and clip it away, and let him cast dry Moulds thereupon; and if it be in the heat of Summer, it should be rubbed over with a little Tar, to keep away the Flies. It is necessary that a Shepherd have a Board set fast to the side of his little Fold, to lay his sheep upon when he handlerh them, and a hole bored in the Board with an Augur, and therein a grained stake of two foot long, to be set fast, to hang his  
Tar-

Tar-box upon, that it may not fall. A Shepherd also should not go without his Dog, his sheep-hook, and a pair of shears, and his Tar-box, either with him, or ready at his Shep-fold, and he must teach his Dog to bark when he would have him; to run, and to leave running when he would have him, or else he is no right Shepherd. His Dog must be taught when he is a Whelp, otherwise it will be hard to make an old Dog stoop, or to be plyant.

*To wash Sheep.*

**I**N June is the time to shear Sheep, and before that they are shorn, they must be very well washed, which as to the Owners sale of the Wool, is a very profitable help, and so to the Cloth-maker: But let the shepherd beware that he put not too many sheep into a Pen at one time, neither at washing, nor at shearing, for fear of murdering or overpressing of their fellows, and that not any of them go away till that they are clean washed. Let the shepherd hold the sheep by the head in the water, and let him hold it high enough to preserve him from Drowning.

*To shear Sheep.*

**L**et the Owner give his shearers a special charge to take heed of their shears, lest they twitch the sheep, and especially for pricking with the point of the shears, and that the shepherd be always ready with his Tar-box to salve them. And let him be sure that they are well marked, both Ear-mark and Pitch-mark, and Robel-mark, and let the Wool  
be

be well folded or wound with a Wool-wind, by one that hath good skill therein, the which shall very much advance the sale thereof.

*How to draw out, and separate the bad Sheep from the good.*

**W**Hen the shepherd hath shorn his sheep, it will then be his best time to draw and separate them in divers manners, the sheep that he will have fed, by themselves, the Ews by themselves, and the Share-hogs and Thieves by themselves, the Lambs by themselves, the Weathers and the Rams by themselves, if he have so many Pastures for them; for the biggest will beat the weakest with his head. And of every sort of sheep, it may happen that there are some that like not, but are weak; those should be put in the fresh Grass by themselves, and when that they are a little Cured, as he sees occasion, he may sell them. The often change of Grass is very wholesome and healthful for all manner of Cattel.

*If a Sheep have the Mathes.*

**T**He Shepherd may perceive this disease by the sheeps biting, or frisking, or shaking of the Tayl: This distemper is most commonly moist and wet; and if it be nigh unto the Tayl, it is oftentimes green, and filled with the sheeps-dung, and then the shepherd must take a pair of shears, and clip away the Wool bare to the skin, let him take a handful of dry Moulds, and cast them upon the wet to dry it, and then wipe the Moulds away, and lay  
Tar

Tar there where the Mathes were, and a little further. Let the shepherd thus look to them every day, and cure them, if there be occasion.

*Of the blindness of Sheep.*

**T**Here are some sheep that will be blind for a season, and yet mend again. Let the shepherd put a little Tar in his Eye: This is the common Medicine that the shepherds use.

*Of the Worm in the Sheeps Foot, and Help thereof.*

**T**Here are some sheeps Feet that have Worms in them, which makes them to halt. Let the shepherd take the sheep, and look betwixt his Cleft, and there is a little hole as much as a great Pins-head, wherein groweth five or six black hairs, an Inch long, or more. Let the shepherd take a sharp-pointed Knife, and slit the skin a quarter of an Inch long about the hole, and as much beneath, and put his one hand in the hollow of the foot under the hinder Cleft; let him set his Thumb above, almost at the slit, and thrust his finger underneath forward, and with his other hand take the black hairs by the end, or with the Knifes point, and pull all the hairs by little and little, and thrust after his other hand with his Finger and his Thumb, and there will come out a Worm like a piece of Flesh, nigh as much as a little Finger. And when it is out, let him put a little Tar in the hole, and it will quickly be cured.

*Of the Blood, and the timely Remedy of it.*

**T**Here is a Sickness amongst Sheep, which is called the Blood, of which they oftentimes die suddenly: The signs of his death are, that he will stand still, and hang down his head, and sometimes quake. The Shepherds Remedy for this Disease is, to take the sheep, and rub him about the head, and especially about his Ears, and under his Eyes, and with his Knife let him cut off his Ears in the midst; and also let him bleed in a Vein under his Eyes; if he bleed well, he is like to live; if he bleed not, then kill him, and save his flesh; for if he die by himself, the flesh is lost, and the skin will be far ruddier, (like to blood) than any other skin shall be.

*Of the Pox, and the Remedy thereof.*

**T**His Disease appears upon the skin in the likeness of red Purples, as broad as a Farthing. This distemper destroys many sheep. To remedy this, the Shepherd is to handle all his sheep, and to survey and look on every part of their bodies, and as many as he finds taken therewith, let him put them into fresh new Grass, and keep them from their Fellows, and let him often have an Eye over his Flock, and draw them as he hath need. And if it be in Summer-time, that there be no Frost, then let him wash them.

Of

*Of the Wood-Evil, and the Remedy thereof.*

**T**Here is a sickness amongst Sheep, that is called the Wood-Evil. It taketh them in the Spring of the year, and taketh them most commonly in their Legs, or in their Neck, and maketh them to halt, and hold their Necks awry: For the most part those that have this sickness, die within a day or two. The best Remedy is to wash them a little, and to change their ground, to bring them to a low Ground, and fresh Grass; for this sickness is most commonly in Hilly, Ley, and Ferny Grounds. Some for this sickness, let their sheep bleed in a Vein under the Eye.

*What are the things that chiefly Rot sheep.*

**I**T is necessary that a Shepherd should know what things chiefly Rot the sheep, that he may the better preserve them. There is a Grass called Spear-wort, it hath a long narrow Leaf, like a Spears head, it will grow a foot high, and it beareth a yellow flower as broad as a Penny. It groweth always in low places, where the water useth to stand in Winter. Another Grass is called Penny-grass, it groweth low, close to the Earth in Moorish Grounds, it hath a Leaf as broad as Two-pence, but never beareth flower. All manner of Grass that the Land-flood runs over, is bad for sheep, because of the sand and the filth that sticketh upon it. All Moorish Ground and Marsh-Ground, is bad for sheep. The Grass that groweth upon Fallows, is not good for sheep; for there is much of it weedy, and oftentimes

times it cometh up by the root, and that bringeth earth with it; and the sheep eat both. Mildew-grass is very bad for sheep, and that we may find out by the Leaves of the Trees in the morning, and especially of Oaks; take the Leaves, and put thy Tongue to them, and thou shalt taste like Honey upon them. Therefore the sheep should not be let out of the Fold, till the Sun hath the power to dry up the Mildew. Want of food will cause a great Rot amongst sheep; for then they will have neither good flesh, nor good skins. White Sinclcs are very bad for sheep in Pastures and in Fallows. There is another Rot that is called the Pellet, which proceeds from great wet, especially in woody Countries, where they find a want of driness.

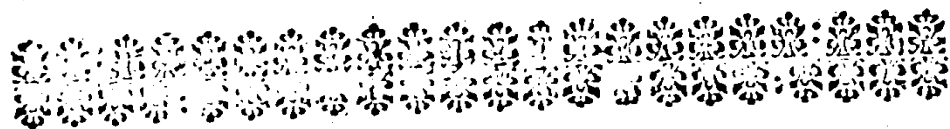
*To know Rotten Sheep divers manner of ways, where-  
of some of them never fail.*

**L** Et the Shepherd use both his hands, and twirl upon the sheeps Eye, and if it be ruddy, and have red strings in the white of the Eye, then the sheep is sound; but if the Eye be white like Tallow, and the strings dark-colour'd, then he is Rotten. Let him also take the sheep upon the Wool of the side, and if his skin be ruddy-colour'd and dry, then he is sound; but if it be pale-colour'd and watry, then he is Rotten. Also when the Shepherd hath opened the Wool of the side, let him take a little of it betwixt his Finger and his Thumb, and pull it a little, if it stick fast, he is sound; if it come lightly off, he is Rotten. When a sheep is killed, if his body be full of water, he is Rotten, and also the fat of the flesh will be yellow, if the Liver be cut, wherein

wherein will be little quicknesses, and live things like flocks, and also the Liver will be full of knots, and white Blisters; if it be Rotten, it will also break and crumble in pieces, but if the sheep be sound, it will hold firm together.

L 2

BRIEF



## BRIEF

## Experimental Directions

For the Right Use of the

## ANGLE.

**H**E that addresseth the River for his pleasure, must be well prepared, as to the setting forth of his Tackle. The first thing he must do, is to observe the Sun, the Wind, the Moon, the Stars, and the Wanes of the Air; he must observe the Times and Seasons to set forth his Tackles; to go for his pleasure and for his profit. As for Example, the Sun proves cloudy, then must he set forth his Ground-bait, or his Tackles, and of the brightest of his Flies. If the Sun proves bright, then must he put on some of the darkest of his Flies. Thus must he go to work with his Flies; light for darkness, and darkness for light; he must also observe that the wind be in the South, for that wind blows the Fly in the Trouts mouth. But if the  
wea-

## right Use of the Angle.

weather be warm, it is indifferent whether the wind standeth, either with Ground-bait or Menow, so that he can cast his Bait into the River. The very same observation is for Night, as for Day; for if the Moon prove clear, or if the Stars glitter in the Skie, there is as ill Angling that night, as if it were high Noon in the midst of Summer, when the Sun shineth brightest, there is little hopes of any pleasure. For the petty *Thames* Recreation of catching of Bleaks, Dace, &c. as they are so generally known of every young Beginner, I am unwilling to trouble the Reader with such a trilling Discourse.

I shall begin, though not without some seeming digression, first with the taking of Eels. When the Angler stays a night or two, let him take four or five Lines, such as I shall inform hereafter will serve for Pikes, of fourteen or fifteen yards long, and at every two yards long make a Noose, to hang a Hook armed either to double thred, or silk twill: for it is better then Wyre. Let him bait his Hooks with Millers-thumbs, Loaches, Menows, or Gudgeons: Let him tye to every Noose a Line bated. These Lines must be laid cross the River in the deepest place, either with stones, or pegged, so that the Line may lye in the bottom of the River, there will be no doubt of taking of a dish of Eels; he must also have a small Needle with an Eye, to bait his Hooks; he must make two Flies, the Palmer rubed with Silver or Gold, and the *Mary-Fly*: These are the ground of all Flies. To make the Palmer Fly, he must arm his Line on the inside of the Hook; let him take his Scissers, and cut so much of the brown of the Mallards feathers, as in his own

reason shall make the wings, then let him lay the outermost part of the feather next the Hook, and the point of the feather towards the shank of the Hook, let him whip it three or four times about the Hook with the same silk he armed the Hook, then make his silk fast: Let him take the Hackle of the Neck of a Cock or a Capon, or a Plovers Top, which is the best, and let him take off the one side of the feather, then he must take the Hackle-silk, or gold or silver thred; and let him make all these-fast at the bent of the Hook, let him work them up to the wings, every bout shifting his fingers, and making a stop. then the gold will fall right, let him make it fast: and work up the Hackle to the same place, and make the Hackle fast; and let him take the Hook betwixt his finger and his thumb, in the left hand, with a Needle or Pin, part the wings in two, then with the arming silk, as he hath fastned all hitherto, let him whip it about as it falleth cross between the wings, and with his Thumb he must turn the point of the feather towards the bent of the Hook; then let him work it three or four times about the shank, so fasten it, and view the proportion. For other Flies: if he make the grounds of Hogs-wool, sandy, black, or white, or the Wool of a Bear, or of a two years old red Bullock; he must work all these grounds upon a waxed silk, then he must arm and set on the wings, as I shewed before; for the *May-Fly*, let him work the body with some of these grounds, which will do very well, ribbed with black hair; he may also work the body with Cruels, imitating the colour, or with silver, suiting the wing. For the *Oak-Fly*, he must make him with orange, tawny and black for the body, and

and the brown of the Mallards feather for the wings.

To take a Perch, the Angler in the first place must take notice that this fish feeds well; and if he lights where they are, they will bite freely. My opinion is (with some more then ordinary Experience) for to baite with Lob-worms chopt in pieces over night; let him go to his sport in the morning betimes, let him plum his Ground, gage his Line, and bait his Hook with a red knotted Worm, or a Menow, which some hold better; let him put the Hook in at the back of the Menow, betwixt the fish and the skin, that the Menow may swim up and down alive, being buoyed up with a Cork or a Quill; that the Menow may have liberty to swim a foot off the ground: So doing, the Angler shall not question the profit or pleasure of his expended time.

I do now think it convenient for me to shew my opinion for floating for Scale-fish in the River or Pond: the feed brings the fish together, as the Sheep to the Pen. There is nothing better in all Anglings for feed, then Blood and Grains, I hold it better then PASTE; then let him observe next to Plum his ground, Angling with fine Tackles, as single hair for half the Line next the Hook, round and small plumed, according to his Float: For the Bait, there is a small red Worm, with a yellow tip on his tayl, which is very good; Brandlins, Gentles, PASTE, or Cadice, which we call Cockbait, they lye in a gravelly husk, under the stones in the River: These are the most special Baites for these kind of fish.

There is a manner of trouling for a Pike with a

Hazel-rod of twelve foot long, with a Ring of Wyre in the top of the Rod, for the Line to run thorow: Within two foot of the bottom of the Rod, there is a whole made to put in a winde to turn with a Barrell, to gather up the Line, and to loose it at pleasure: This is the best manner of Trouling. But I am of opinion that I can shew a way, either in Meer, Pond, or River, that shall take more Pikes than any Trouler with his Rod. And thus it is: First, take a forked stick, a Line of twelve yards long wond upon it, at the upper end leave about a yard, either to tie a bunch of Sags, or a Bladder, to buoy up the fish, and to carry it from the ground: The Bait must be a live fish, either Dace, Gudgin, Roach, or a small Trout: The forked stick must have a slit in the one side of the Fork to put in the Line, that he may set his live-fish to swim at a Gage, that when the Pike taketh the Bait, he may have the full liberty of the Line for his feed. He may turn these loose either in the Pond or the River: In the Pond with the wind all the day long, the more the better: At night let him set some small weight, that may stay the Buoy, as a Ship lieth at Anchor, till the fish taketh. For the River, he must turn all loose with the stream; two or three are sufficient to shew pleasure, gaged at such a depth, as that they will go current down the River, where there shall be no doubt of excellent sport, if there be Pikes: For the Hooks, they must be double Hooks, the shanks must be somewhat shorter than ordinary: My reason, the shorter the Hook is of the shank, it will hurt the fish the less, and it must be armed with small wyre well softned. But I hold a Hook armed with twisted silk to be better,

better. If you arm your Hook with wyre, the Needle must be made with an Eye; then must he take one of those Baits alive (which he can get) and with one of his Needles, enter within a straws breadth of the Gill of the fish, so pull the Needle betwixt the skin and the fish; then pull the Needle out at the hindmost fin, and draw the arming thorow the fish, until the Hook come to lie close to the fishes body: But I hold for those that are armed with wyre, to take off the Hook, and put the Needle in the hindmost fin, and so to come out at the Gill; then let him put on the Hook drawn close to the body, 'twill hurt the live fish the less, so knit the arming with the live fish to the Line; then let him put off either in Meer or Pond, with the wind, in the River with the stream: The more that he pulls off in the Meer or Pond, he is the likelier to have the greater pleasure. There is a time when Pikes go a frogging in Ditches, and in the River to sun them, as in *May, June, and July*, there is then a speedy way to take them, and scarce to miss one in twenty. The Angler must take a Line of six or eight foot, let him arm a large Hook, of the largest size that is made, and arm it to his Line, let him lead the shank of his Hook very handsomely, that it may be of such a weight, that he may guide the Hook at his pleasure: He may strike the Pike that he sees, with the bare Hook where he pleases: This Line and Hook doth far exceed snaring. The best sport to take a Pike, is to take a Goose, or Gander, or Duck; take one of the Pikes Lines I have before described, and let him tie the Line under the left wing, and over the right wing, about the body, as a man weareth his Belt: Turn the Goose off into  
the



the Pond, where Pikes are, and there will be pleasant rare Feats betwixt the Goose and the Pike.

To take a Carp, either in Pond or River, if the Angler intends to have sport with some profit, he must take a Peck of Ale-grains, and a good quantity of any Blood, and mix the Grains and the Blood together, and cast into the place where he meant to Angle; this feed will gather the Scale-fish, as Carp, Tench, Roach, Dace, and Bream: The next morning let him be at his sport very early, plum his Ground, and he may Angle for the Carp with a strong Line; the Bait must be either a red knotted Worm or Paste, and he shall have sport enough.

The Angler may begin to Angle for a Trout with Ground-baits, in this manner following: First, he must be sure of a neat Taper-Rod, light before, with a tender Hazel top, which is very gentle, he may Angle with a single hair of five lengths, one tied to the other for the bottom of the Line, and a Line of three-haired Links for the upper part, and so if he have good Sea-room, he may take the largest Trout that swims. He that Angles with a Line made of three-haired Links at the bottom, and more at the top, may take Trouts: But he that angles with one hair, shall take five Trouts to the others one; for this fish is very quick-sighted: Therefore the best way for night or day, is to keep out of sight. He must angle always with the point of his Rod down the stream; for a fish hath not the quickness so perfect up the stream, as opposite against him, observing seasonable times. As for Example; we begin to angle in *March*, if it prove cloudy, the Angler must angle with the Ground-baits all day long: But if it prove clear and bright, he must take the

the morning and evening, or else he is not like to do any good; for the times must be observed, and truly understood: For when an Angler cometh to the River for his pleasure, that doth not understand to set forth his Tackles fit for the time, it is as good keeping of them in the Bag, as to set them forth.

The Angler that doth intend to angle with the Ground-baits, let him set his Tackles to his Rod, and let him begin at the uppermost part of the stream, carrying his Line with an upright hand, feeling the plummet running on the Ground some ten Inches from the Hook, plumbing his Line according to the swiftness of the stream that he angles in; for one plummet will not serve for all streams; for the true Angling is, that the plummet runneth on the Ground. For his Bait, let him take the red knotted Worm, which is very good where Brandlings are not to be had. Now that he may make these Brandlings fit to be angled with, that they may live long upon the Hook, which causeth the sport. When he hath gathered his Worms out of the Dunghil, he must get the greenest Moss he can find, then wash the earth very clean out of it, then let him have an Earthen-pot to put his Moss into it, and let him put his Worms to the Moss in the Pot, and within two days he shall find his Worms so poor, that if he bait some of them on his Hook, he shall see that with throwing them two or three times into the water, they will die and grow white. Now the skill is, when these Worms are grown poor, to feed them up, to make them fat and lusty; he must take the Yolk of an Egg, some eight or ten spoonfuls of the top of new Milk, beaten well together in

in a Porrenger; let him warm it a little until that it curdle, then let him take it off from the fire, and set it to cool; when it is cold, let him take a spoonful, and drop it upon his Moss into the Pot, every drop about the bigness of a green Pea, shifting his Moss twice a week in the Summer, and once in the Winter. Thus doing, he shall feed his worms fat, and make them lusty, that they will live a long time on the Hook; thus he may keep them all the year long. This is my true Experience for the Ground-baits, for the Running-Line for the Trout.

The Angling with the Menow, called in some places Pencks, for a Trout, is a pleasant sport, that taketh the greatest Fish. The Trout comes as boldly to the Bait, as if it were a Maltive-Dog at a Bear: The Angler may use his stronger and greater Tackle, and it will be advantagious to him in his Angling, to use a Line made of three silks, and three hairs twisted for the uppermost part of the Line, and two silks and two hairs twisted for the bottom next his Hook, with a Swivell nigh to the middle of his Line, with an indifferent large Hook.

Let him bait his Hook with a Menow, he must put his Hook through the lowermost part of his mouth, so draw his Hook thorow, then put the Hook in at the mouth again, and let the point of the Hook come out at the hindmost Fin, then let him draw his Line, and the Menows mouth will close, that no water will get into its belly: He must Angle (as hath been said) with the point of his Angle down the stream, drawing the Menow up the stream by little and little, nigh the top of the water; the Trout seeing the Bait, cometh most fiercely at it, the Angler must give a little time before he

he strikes: This is a true way without Lead; for many times I have had them come to the Lead, and forsake the Menow, which he that tries in time will prove.

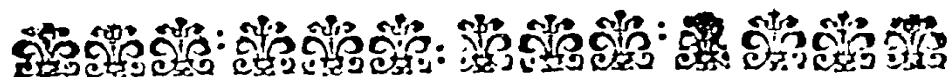
My next task will be to instruct the young Angler how to angle with a Flye. Let him fit himself with a Hazel, either of one piece, or two set together in the most convenient manner, light and gentle: Let him set his Line to the Rod, for the uppermost part he may use his one discretion; for the lower part next the Fly, must be of three or four haired Links. If he can attain to angle with one hair, he shall have the more rises, and take more fish; let him be sure that he do not over-load himself with the length of his Line: and before that he begin to angle, let him make a tryal, having the wind on his back, to see at what length he can cast his Flie, that the Flie light first into the water; for if any of the Line falleth into the water before the Flie, it had been better unthrown then thrown. Let him always cast down the stream, with the wind behind him, and the Sun before: it is a great advantage for him to have the Sun or the Moon before him. Let him begin to angle in *March* march with the Flie: but if the weather prove windy or cloudy, there are several kinds of Palmers that are good at that time. First is a black Palmer ribbed with silver: the second, a black Palmer, with an Orange tawny body: thirdly, a black Palmer, with the body made of all black: fourthly, a red Palmer ribbed with gold, and a red Huckle mixed with Orange Cruel. These Flies serve all the year long, morning and evening, whether windy or cloudy weather. But if the Air prove bright and clear, he may imitate the Hawthorn Flie, which is all black and

and very small, and the smaller, the better. In *May* let him take the *May-Flie*, and imitate that, which is made several waies: Some make them with a shammy body, ribbed with a black hair; others make them with sandy Hogs-wool, ribbed with black silk, and winged with a Mallards feather, several ways, according to the fancy of the Angler. There is another called the *Oak-Flie*, which is made of Orange-colour'd Cruel, and black, with a brown wing;: another *Flie*, the body thereof is made with the strain of a Peacocks-feather, which is very good in a bright day. The *Grashopper* which is green, the smaller *Flies* are made of indifferent small Hooks, which are the better: these several sorts I have set down, will serve for the year long, observing the times and seasons: And let him take notice, that the lightest *Flies* are for cloudy and dark weather, the darkest for bright and light, and the rest for indifferent seasons, for which his own judgment, experience, and discretion must guide him; so that he must alter these *Flies* according to these directions. Of late daies the *Hogs-wool*, of several colours, the wool of a red Heifer, and Bears-wool are made use of, which make good grounds; they are now very much used, and procure very good sport. The natural *Flie* is a sure way of angling, and will catch great store of *Trouts* with much pleasure. As for the *May Flie*, he shall always have them playing at the River-side, especially against Rain. The *Oak-Flie* is to be had on the But of an Oak, or an Ash, from the beginning of *May* to the end of *August*: it is a brownish *Flie*, and stands alwaies with his head towards the root of the Tree, very easie to be found. The small black *Flie* is

to

to be had on every Hawthorn-bush, after the Buds are come forth. The *Grashopper*, which is green, is to be had in any Meadow of Grass in *June* or *July*: with these *Flies*, he must use such a Rod as to angle with the Ground-bait; the *Line* must not be as long as the Rod: Let him with draw his *Flie*, as he shall find to be most convenient in his Angling. When he comes to deep Water that stand somewhat still, let him make his *Line* about two yards long, and dophis *Flie* behind a Bush, at which Angling I have had very good sport. The way to make the best Paste, is to take a reasonable quantity of fresh Butter, as much fresh Sheeps Suet, a reasonable quantity of the strongest Cheese he can get, with the soft of an old stale white Loaf; let him beat all these in a Mortar, till they come to a perfect Paste: and when the Angler goes to his sport, let him put as much on his Hook as a green Pease.

The



## The Nature, Use, and Benefit of Marle.

**M**arle is a very useful thing, the Nature of it is cold, which is the reason that it saddens the Land exceedingly, for it is very heavy, and will go downwards. Some Countries yield Marle of several colours, as 'tis affirmed of *Kent*, wherein is found both yellow and gray; the blew and red are counted best. To marle together, I hold not proper; but when you are resolved to lay down your Land to graze, be sure at the last Crop you intend to take (which may be two or three more after marling) then manure your Land, for the less binding, and the more light, loose and open, the more fruitful it is, so that it will produce a gallant Cloverly. The first year after you have laid it down upon the Wheat or mixed Corn-stubble, you must run it over again with Dung, and it will pay treble. Now the Lands upon which Marle is most natural for increase, is upon your higher sandy Land, mixed of gravelly or any sound Land whatsoever, though never so barren, to which it is natural and nourishing, as Bread to a mans Life.

The

### The best way of planting of Trefoyl or Clover-grass.

**T**Here are several sorts of Clover, I shall only speak of the great Clover that we fetch from *Flanders*, called Trefoyl, named by *Clusius* *Trefolio majus tertium*, which bears the red Honey-suckle, whose root and branches far exceed our natural Meadow-Clover, and bears a very small seed like Mustard seed, not so round, but longer like a Bean; the best is of a greenish yellow colour, some a little reddish; the black, I suppose, will not do well. Your Dutch or Low-Country seed, or from the lower parts of *Germany*, is very much of it, but very hazardous that comes over hither; but being well chose there (for the choice is the Master-piece of the work) the transporting of it by Sea is no considerable prejudice to it; But much of it that was sold in the Seedmens Shops in *London*, was either corrupted by the Dutch before it came thence, or else parched by our drying, or else by the Shopkeepers, either mingled with old or new, or keeping it another year, and then selling it for new. The best way of sowing of this Dutch Seed, must be by mixture of it with Ashes of Wood, or Coals coarsely sifted, or with some Dust, or good Sand, or fine Mould, or any thing else that will help to fill the Land, or spread well forth of the Land: and after this I must press as the weightiest thing of this Husbandry, to have a most special care of the even sowing of it, because the wind, though very small, hath power over this, and therefore you must chose as calm a time as possibly you can. You may sow it

M upon

pon any Land you intend to graze upon, any fair places in a Meadow, or High-ways trodden or poched, it will soard them: but the usual way is thus advised; when that you have fitted your Land by Tillage and good Husbandry, then sow your Barley or Oats, and harrow them in, and after your Clover upon the same Land, covered over with small Harrow or Bust, but sow not the Corn as you usually did; but if you will lose this Crop, you may sow it of it self. The season of it is in the beginning of *April*, or in the end of *March*, if it be likely to be a dry season. I have heard of three Crops, and some affirme that it will bear, two to cut, and one for to graze; the first Crop may be at mid-*May* ready to cut, and this Crop is best always to be cut green, and before the stalk begin to grow too big, and begin to dry and wither, unless it be for Seed; therefore as Experience will teach, it will be best to cut it green and young, and give it to Cattel or Horse in the Stable; for if you cut it to keep, it will go so near together, as that it will do but little service dry; yet if being cut young, it will be very good and sweet, and either feed or give Milk abundantly; and then after the first cut, let it grow for Seed, and herein you must be careful, that you let it grow till it be full ripe, for it will not be very apt to shed; and if it grow to seed, I cannot conceive of what use these stalks that are so hard and dry can be, unless it be for firing in a dry Country, so that the seed must be the advance of that Crop only, and so it may well enough, and you may have a good after-pasture, and may graze it until *January*, and then preserve it. But if you would know when your Seed is ripe, observe these two Particulars. First, observe

observe the Husk, when the Seed appears in it, then about one month after it may be ripe. Secondly try the Seed, after it begins to turn the colour, and the stalk begins to dye and turn brown, it begins to ripen, and being turned to a yellowish colour, in a dry time mow it, and preserve it till it be perfectly dry any manner of way, and then about the midst of *March* thresh it, and cleanse it from the straw as much as you can; foulder and beat the Husk again, being exceeding well dried in the Sun after the first threshing, and then get out what seed you can, and after try what a Mill will do at the rest, as aforesaid more at large: But I will give way to any that can make a better discovery. I need not prescribe a time in *July* or *August* as best to cut for seed, because some years and Lands will ripen it sooner than others will; therefore have respect to thy seed and Straw according to the former directions: But when you are to go into good seed, you must graze it upon the Land, and then be sure not to let it grow too rank and high; but if the stalk grow big, Cattel will balk it, and stain it more, and it will not eat up so kindly at first, nor graze so even afterwards, but exceeding much Milk it will yield, and feed and nourish very well. But to affirm, (as some have done, and do confidently to this day) that it will grow on the barrenest Ground that is, as on *Windsor Forrest*, I dare not; I have knowen that it hath failed, and I am confident must, without exceeding great cost on Husbandry; yet that very Land well manured and tilled, dunged, limed, marled, or chalkt, or otherwise made fat and warm, will bring forth good Clover, and other rich Commodities, as they do in *Flanders*: the Nature

ture of the Land is good, but the Spirit of it is too low to raise it of it self. And this is all that is held forth in the discourse of *Brabant* Husbandry, exceeding barren Lands, but well dunged and tilled, and then Clovered, not that it is the barren Land, but the good and costly Husbandry; only the oldness of the Land, and the restiness thereof, yields more spirit to the Grain or Clover by far, then the the tillable Land well husbanded, and laid down with Clover, will do very well also. The quantity of seed for an Acre, as I conceive, will be a Gallon, or nine or ten pound, though some are of opinion less will serve turn. Therefore, as I said before, I say your old Land, be it coarse or rich, as it is, or hath been dressed with Tillage long, is best for Corn; so also it is the best and most certain Land for Clover; and when you have corned your Land as much as you intend, then to alter it to Clover, is the properest season. This I shall lay down for a general Rule, that whatsoever Land is neither too rank or fat for any sort of Corn, is not too good to Clover, and you shall alwaies find it to be the best Husbandry, unless you recover the barren Lands up to a good and rich condition, which is also the far better Husbandry, than to let it lie pelting and moiling upon poor mean Land unfatned by some soils or other; therefore I advise every man to plow up no more than he can well overcome by his Purse and Husbandry, and let the rest lie till he have brought up the other, and then as he hath raised one part, take up another, and lay down that to graze, either with Clover or otherwise: And let him take heed that flatters himself to raise good Clover upon barren Heathy Land, otherwise than aforesaid. Let him take

takenotice, he will pull down his Plumes after two or three years Experience, unless he devise a new way of Husbandry: As to the annual profit that may accrue thereby, I shall a little differ from the *Flanders* Husbandry, but shall affirm, that one Acre, after the Corn is cut, the very next year if it be well husbanded, and kind thick Clover, may be worth twenty Marks, or twenty pounds, and so downwards, as it degenerates weaker, less worth. In *Brabant* they speak of keeping four Cows Winter and Summer, some cut and laid up for Fodder, others cut and eaten green; but I have credibly heard of some in *England*, that about one Acre kept four Coach-horses, and more all Summer long; but if he keep but two Cows, it is advantage enough upon such Lands as never kept one: But I conceive best for us, until we come into a stock of Seed; to mow the first Crop in the midst or end of *May*, and to lay that up for Hay, although it will go very near together; yet if it grow not too strong. it will be exceeding good and rich, and feed any thing, and reserve the next for Seed; and if we can bring it up to perfect Seed, if it but yields four Bushels upon an Acre, it will amount to more than I speak of by far, every Bushel being worth three or four pound a Bushel; and then after the Math or Eadish, that year may be put up three midling Runts upon an Acre, and feed them up: All which laid together, will make up an Improvement sufficient; and yet this property it hath also, that after the three first years of clovering, it will so frame the Earth, that it will be very fit to corn again, which will be a very great advantage. First to corn the Land, which usually yields a far better

profit than grasing, and sometimes a double profit, and sometimes more, near a treble profit, and then to Clover it again, will afford a wondrous strange advance. And if you consider one Acre with the Clover and Husbandry thereof, may stand you the first year in twenty Shillings, the Land being worth no more, which may produce you yearly (if it thrives well) easily five, six, or eight pounds *per* Acre, nay some will affirm, ten or twelve pounds, or more.

*Of the Plantation of Hops, and how Land is Improved thereby.*

**H**Ops is grown a National Commodity: But it was not many years since the Famous City of *London* petitioned the Parliament of *England*, against two nufances, or Offensive Commodities, were likely to come into great use and esteem; that was *Newcastle* Coal, in regard of their stench, &c. and Hops, in regard that they would spoil the taste of Drink, and endanger the peoples healths, and for some other reasons, I do not well remember: But petition they did to suppress them, and had the Parliament been no wiser than they, we had been in a measure pined, and in a greater measure starved. This Hop-plantation will require a large Discourse; but I shall contract my self to the briefest Discovery thereof I can possibly. 1. Choose the Land that is best for them, and best Sets to plant withal. 2. The best manner of Planting them, and Husbanding of them, until they are fit for Sale. 3. The Profit and Advantage that will accrue thereby, I shall afterwards, as plainly as I can, express. 4. Describe

cribe the manner of its growth, thus: It comes up with several sprights like Asparagus, runs up and climbs upon any thing it meets withal. bears a long stalk, hairy, and rugged Leaves, broad like the Vine, the flowers hang down by clusters, set as it were with scales yellowish, called in high Dutch, *Lupulus*, in Low Dutch, *Hopsem*, and in English, *Hop*. It is Ouse five upon this account, hot in the first Degree, stuffs the Head with the smell, therefore use it not too much; yet the Leaves open and cleanse. The best Land is your richest Land, it must be a deep Mould, that which lieth near the Rock, the Poles cannot be set deep enough to stand firm; it should be a mixt Earth that is compounded Sand and a little Clay, but much solid Earth, a strongish Land laid dry and warm, will bear the weightiest Hops. A barren, Moorish, wet Soil is not natural to Hops; but if this be laid very dry, and made very rich with Dung and Soil, it may do reasonable well. The Hop-Garden should stand warm, that it may be preserved from North and East winds, rather by Hills than Trees, as near your House as may be, and that Land you determine for your Hop-Garden, lay as Level and as Square as you can; and if it be rough and stiff, it will do well to be sowed with Hemp, Beans, or Turneps before; but in what state soever it be, till in the beginning of Winter, make use of the Plough or Spade, and this not only the year before, but every year as long as you use it; and the more pains and cost you bestow, the more profit, and is the nearer to you, resemble the *Flemming* in his Hopping. And for your Sets, and good Roots, to procure them, you must go to a Garden orderly kept, where

the Hops are of a good kind, all yearly cut, and where the Hills are raised very high, for the Roots will be greatest, be sure to buy choise Sets; they may cost sixpence a hundred in some places, and sometimes you may have them for the taking up: Leave your Husbandry orderly, their Hills well drest. You must chuse the biggest Roots you can find, such as are three or four Inches about, and the Set nine or ten Inches long, and have three Joynts in a Root. Take heed of wild Hops, they are only discerned by the Root and Stalk. The unkindly Hop that likes not his Ground, Soil, or Keeping, comes up green and small in the stalk, thick and rough in the Leaves like Nettles, much bitten with a black Flie, but it destroys not the Hop, but somewhat Injures it. The manner of Planting as soon as your Roots are got, is either to set them speedily, or lay them in some Puddle, or bury them in Earth; but leave them not in Water above twenty four hours: Then begin to direct your Hills with a Line, tied with Knots and Threads thereto; the due distance had need to be eight Foot betwixt, because then you make the fewer and bigger Hills, the Sun comes about them. Let the Poles reach not one another, that so it may be plowed yearly the more easily, otherwise it must be digged, some say seven foot, and others say six foot, as one lately accustomed manner is. And I am confident there is more advantage by thin planting: But that I leave to each mans Experience. Your hole under the Knot of your Line, had need be a foot square and deep, then if you can have the Wind South, or West, it is best; if not, go on, having made many holes; but be sure to take the Mouth of *April*, for the work, and take two or three of your Roots, as a great old Gardi-

ner affirmed to me, by which they will yield green Sciens, or white Buds, and will have small beards growing out. Joyn your Sets together, even in the tops, and set them altogether both upright, and there hold them in their place, till you have filled the hole with good Mould, and set low, but just as the tops may be Level with the Ground, and then after they must be covered thick with fine Mould; be careful you set not that end downwards which before grew upwards, which you may know by the bad growing upwards, and let no part of the dead stalk remain upon the uppermost Joynt thereof; then press down the Earth hard to the Roots. Some will set them every one at a corner of the foot of the Line, which I rather incline to, because they have room, and stand round: But if you plant late, and have green springs upon them, then be careful of not covering the spring; but to set more Plants, lest some should fail, and in a bigger hole, round about the same set eight, some say ten or more, which is thought tedious. Now at this time you need make no Hills at all there, as aforesaid. Poultry must be kept from thence for scratching, the Goose more especially, or any things that are mischievous. Now for poling, if your distance be three yards, or eight foot, then four Poles are required, else three will serve; but I incline to six or seven foot distance, and four Poles, and as many this year as any. Elder Poles are very good, Taper, and Rough, and suitable to the Hops desire. The time of cutting your Poles is in *December*, or in *November*, and then dress them, and pile them up dry; if you leave some Twigs it will not do amiss. For length fifteen foot is well, except your Ground be very rich, or  
your



your Hills exceedingly heightned; if they grow too thick, your Poles need to be the longer. The Hop never stocketh kindly, until it reach higher than the Pole, and returneth a yard or two; for whilst it is climbing, the branches that grow out of the principal stalk, grow little or nothing. Let your Poles be strong nine Inches above the bottom, they will stand the faster: 150 Poles make a Load, which may be worth a little more than ordinary Wood, a few will supply the standing stock. In setting you Poles, lay all to each Hill you intend to set, which speeds the work. When your Hops appear, as you discern where your principal Root stands, then set to poling, having a Crow of Iron to make entrance for the Pole: But if you stay longer, then you will be more subject, either by running or making holes, to bruise the Root, or else they will not so easily catch the Pole without flying. Your foot of the Pole must be set a foot and a half deep, and within two or three Inches of the principal Root: But if your Land be Rocky, then you must help your self by making your Hill higher to strengthen your Poles, for which you stay the longer; lest that you bury your Sciens, your Poles of each Hill, leave them rather outward one from another, and then with a Rammer ram them outward, and not inward. If a Pole should break, take away the broken Pole, then tie the top of those Hops to a new Pole, then winding it with the Sun a turn or two, set it in the hole; but if you take a stake, and tie it to, without wresting the Wyers of it, you may do well to piece it; but if it be broken at the nether end, shove the Pole in again; and if your Poles break in the pulling, or will not be drawn, by

reason

reason of the Drought or Hardness, you may make a pair of Pinsors of four or five Foot long, with an Iron running Hook upon them, and with a Block laid under, upon the top of the Hill, and so coleweigh up your Poles, the mouth thereof made hollow. And for laying up your Poles, the usual way is to tie two and two together in the top, being set in six opposite Hills, and lay some Hop-bands upon the three Hills, under your Hop-poles, and so draw your tops near together, or farther off, as you see cause. When your Hops are grown two foot high, bind up with a Rush, or Grass your binds to the Poles, winding them about the Poles as often as you can, and winde them according to the course of the Sun, but not when the dew is upon them: Your Rushes lying in the Sun, will grow tough. Now you must begin to make your Hills, and for that purpose get a good strong Ho, of a good broad bit, & Cut or Ho up all the Grass, in the Bowlers betwixt your Hills, and therewith make your Hills with a little of your Mould, but not with strong Weeds, and the more your Hills are raised, the better, the larger and the stronger grows the Root, and the bigger will be your Fruit, and from this time you must be painful in raising your Hills, and clearing your Ground from Weeds. In the first year suppress not one Scien, but suffer them all to climb up the Poles, and should you bury the Springs of any one of your Roots, it would die, so that the more poles are required to nourish the Spring. But after the first year, you must not suffer above two or three stalks to grow up to one pole, but pull down and bury all the rest; yet you may let them grow four or five foot long, and then chuse out the best

best for use. As soon as your pole is set, you may make a Circle how broad your Hill shall be, and then hollow it, that it may receive the moisture; and not long after, proceed to the building of your Hills. Where you begin, and where your Hops are highest, there begin again, and pare again, and lay them to your Hops, but lay the out-circle highest to receive moisture, and be always paring up, and laying to the heap, with some Mould, until the heap comes to be near a Yard high; but the first Year make it not too high, and as you pass through your Garden, have a forked Wand in your hand to help the Hops that hang not right. Now these Hills must the next year be pulled down, and dressed again every year. Some when their Hop is eleven or twelve foot, break off the tops, which are better than they which have their pole so long as the Hop runs: But if that your Hop by the midst of *July*, attain not to the top of the pole, then break off the top of the same Hop; for then the rest of the time will nourish the branches, which otherwise will lose all, it being no advantage in running up to the stock, or increase of the Hop. Now we come to the gathering of them; about *St. Margarets Day*, Hops blow, and at *Lammas* they bell: But when your Hops begin to change colour, it is a little before *Michaëmas*, but long before some will turn, change, and grow ripe, which howsoever the best way will be to pull them, and not suffer them to shed; they are called *Midsummer-Hops*. Let them not grow till the other be ripe, and as soon as the seed of the rest begins to change, then get Pullers amain, and as many as you can, taking a fair season; and note, you were better to gather them too

early

early than too late. Therefore for neatness sake, pull down four hills standing together in the midst of your Garden, cut the Roots, pare the same plat level, throw water on it, tread it, sweep it, and make it fat, wherein the Hops must lie to be pickt. Then begin and cut the stalks close by the tops of the hills, and cut them asunder that grow one into another, with a long sharp Hook, and with a Fork take them down; you may make them Fork and Hook, one apt Instrument, with which you may shove off all from the pole, and carry it to the place, and pick them off from the pole. Straight fine poles are best for this way, but cut no more stalks, than you can carry away in the space of one hour aforehand; for either the Sun, or Rain, will offend them when they are off of the pole; they must all stand round the floor, and speedily strip them in Baskets; for it is not unwholesome, though some smaller Leaves fall amongst them. Clear your floor twice aday, and sweep it, and if the Weather be unlike to be fair, they may be carried into the House in Blankets; but use no Linnen, it will be stained to the purpose. And if you pull them upon poles, then lay them upon Forked stakes, and dispatch them, be careful of wet, lest they shed their seed, which is the marrow of them, and carry out your straw, and so depart your Garden till *March*, unless it be to bring in Dung. Lay on some in the Winter to comfort and warm the Roots, your old Dung is best, rather none than not Rotten. And in *April*, help every Hill with a handful or two of good Earth, when the Hop is wound upon the pole; but in *March*, you will find, unless it hath been Tilled, all Weeds. But if you have pulled down your Hills,

and

and laid your Ground as it were Level, it will serve to maintain your hills for a long time: But if you have not pulled down your hills, you shall with your Ho, as it were, undermine them round, till that you come near to the principal, and take the upper or younger Roots in your hand, discerning where the new Roots grow out of the old Sets, but cut no Roots before the beginning of *March*, or end of *April*. The first year of dressing your Roots, you must cut away all such as grew the year before within an Inch of the same, and every year after, cut them as close to the old Roots. Those that grow downward are not to be Cut, they are those that grow outward, which will Incumber your Garden. The difference betwixt Old and New, easily appears: You will find your old Sets not increased in length, but a little in bigness, and in few years all your Sets will be grown into one, and by the colour also, the main Root being red, the other white: But if this be not yearly done, then they will not be perceived; and if your Sets be small, and placed in good Ground, and the hill well maintained, the new Roots will be greater than the old; if they grow to wild Hops, the stalk will wax red, pull them down, and plant new in their places. As for the Annual Charge of the Hop-Garden after it is planted, the Dressing the Hills, the Allies, the Hoing them, the Poling them. and Tying to the Poles, and Ordering the Hops, is usually done for Forty Shillings an Acre, together with Pulling, Drying, and Biggering by the Day. And so I proceed to the Drying of them, which may be upon any ordinary Kilne, with any Wood that is dry, but not too old; or else good sweet Rye-straw will do

do well, but Charcoal best of all. They must be laid about nine or ten Inches thick, and Dried a good while on that side, and then turned upside down, and Dried as much on the other side: About twelve hours will dry a Kilne full, which must be followed night and day, then laid up in a close Room upon a heap together for a Month, if your Markets will give you way to frume and forgive again: When the stalk begins to be brittle, and the Leaf also begins to rub, then the Hop is dried sufficiently, but tread them not while they are hot, it will tread them to dust, and then either against *Sturbridge-Fair*, or what other Markets you provide for, you may bag them up close and hard, either to 200 a Quarter. And so I come to my next particular, to shew you the Profit of them: One Acre of good Hops may possibly be worth at a good Market, Forty, Fifty, Sixty Pounds; an Acre may bear Eleven, or Twelve Hundred Weight, possibly some have done more, many Ten; but grant but Eight Hundred, they may sometimes be worth not above One Pound Four Shillings the Hundred, and some other times they have been worth Twelve or Fourteen Pound a Hundred, and usually once in three Years they bring Money enough. It is usually a very good Commodity, and many times extraordinary, and our Nation may ascribe unto it self, to raise the best Hops of any other Nation. There's an old Saying:

—————*Here's to and Beer,  
Hopt into England in one Year.*

*Of the Mystery of Saffron, and the way of planting of it.*

**T**Here is another very rich Commodity wherein our Nation hath the Glory, and yet it is a very Mystery to many parts of it; they know not whether such a thing grows in *England*; and yet none such so good grows in the World besides, that I have ever heard or read of, and that is Saffron. It is a most soveraign and a wholesom thing, and if it take right, it is very advantagious and costly for price. It hath its ebbings and its flowings, as all other things have. I shall briefly give you the story of it: Good Land that is of the value of 20 *l.* an Acre, being well Husbanded, tilled and fitted, or worser Land being well manured, and brought to perfect Tillage, will serve the turn; but the better, the better for the work. The season is about *Midsummer*, when it is to be set, that being the season when they usually take up, or draw their Sets or Roots, and old store, when they may be had, and no time else. The Land being brought into perfect Tillage, the best way is to make a Tool like a Ho in operation, but as broad as six of them, and with that they draw their Land into ranges, open, as it were a Furrow about two or three inches deep, and there place their Sets or Roots of Saffron about two or three inches asunder (which Roots are to be bought by the Strike, sometimes dearer, and sometimes cheaper, and are very like to Onions, an Onion about an inch and a half over) and as soon as they have made one Furrow all along their Land from one end to another, then they, after that it is set,

set, begin in another, and draw that which they raise next to cover this, and so they make their Trench, and cover the other; they keep one depth as near as may be, which Ranges, or Furrows, are not above three or four Inches distance, that so a Ho of two or three Inches distance may go betwixt them to draw up the Weed, which being set and covered, it may come up that Summer, but it dies again; yet it lives all Winter, and grows green like Chives or small Leeks. And in the beginning of Summer it dieth wholly, as by the blade of it is to appearance; let one come and take a Ho, and draw all over it, and cleanse it very well, and then will come up the Flower without the Leaf. In *September* the Flower of it appears like Crocus that is blew, and in the middle of it come up two or three Chives which grow upright together, and the rest of the Flower spreads abroad, which Chives is the very Saffron, which you may take betwixt your fingers and hold it, and cast away all the rest of the Flower, and reserve that only, and so they pick it, and they must pick it every morning early, or else it returns back into the body of it, to the Earth again, until the next morning, and so from one to another, for a months space it will bear Saffron. You must get as many Pickers as may overcome it, before it strike in at the very nick in the morning. It will grow to bear a Crop, and then it must be taken up, and planted new again, and then it will yield good store of Sets to spare, which cannot be had any other way. It must be taken up at *Midsummer*, and then Set as aforesaid. And when that you have got your Saffron, then you must set it a drying; and thus you must do, make a Kilne of  
N Clay,

Clay, not half so big as a Bee-hive, and very like it will be made with a few little Sticks and Clay, and serve excellently well for this service. A little fire of Charcoal will serve to dry it, but it must be very carefully tended. Three pound of wet Saffron will make one of dry. An Acre of Land may bear fourteen or fifteen pounds of Saffron, if very good: But if seven or eight pounds, it will do the work, and one Acre of it will be managed with no great charge. I do not believe it can come to 4 *l.* an Acre, it hath been sold from 20 *s.* a pound to 5 *l.* a pound, It is an excellent advantage, and brings in at worst a saving bargain, but it may possibly be worth 30 or 40 *l.* an Acre; but if it come to 7 or 8 *l.* it loseth not. The Saffron-Country is (on one side and Nook of *Essex*, and some part of *Suffolk*) at *Saffron-Walden*, and betwixt that and *Cambridge* hath very much of it in their Common-fields: And truly these Lands are but of a middle worth. I have seen as rich Lands again in many Parts of *England*; but it is, as I believe, Loamy Ground, and of a little sadder Nature. It will require to be laid dry and sound, and the Land it self must be very sound and wholesome.

*Of the Plantation of Liquorice at large.*

**I** Proceed to another National Commodity, in the Plantation whereof we exceed all other Nations, and that is Liquorice, our English Liquorice, as we call it; being far beyond the Spanish Liquorice or any other. The planting of it few understand, and fewer practise. That I may be open, and full in the discovery of it; I shall under two or three Heads,

Heads, formalize what I intend to express. 1. To discover the best Land to bear it. 2. The best way I can find practised to Plant it. 3. The Profits and Advantages of it. The best Land to raise your Liquorice upon, is your richest you can get or make, your warmest you can find out, the soundest and the driest that is possible to be had, of a very deep soil; you must Dig and prepare your Land before you Set, and it must be Digged three Spades deep, and two or three shovelings at the least, laid as hollow and as light as may be: You must have it digg'd out of Natural Land, if it be very rich Land indeed, that it will feed an Ox in a Summer; it is the best for Eight-pence a Rod at *London*, Forty Rods make a Rood, which is a quarter of an Acre, which comes to about 4 or 5 *l.* an Acre; and this is the main charge of all for three years, there is no more, unless it be a little Hoing, which rids off of the hands very fast; I believe it will not cost above 20 *s.* an Acre more in all the three Years, both in Setting, and all the Dressings of it, besides the Sets and Land: The Sets being doubly, trebly, worth your Money. Sets have been sold for 2 *s.* the Hundred; but if your Land be not fresh Land, or extraordinary rich, and as rich as your best Gardens are, it must be made so with Soils and warm Manures. Horse-dung is excellent to be Intrenched into the Earth, it both warms and lightens it, and makes it fit for this service. About *London*, are very serviceable Lands for it, and so is any dry Soil whatsoever, where it is rich enough and deep; that which bears this well, will also bear your Moulder Weed, that rich Commodity. Having digged and prepared your Land, you may proceed to the planting of it, and therein

you must endeavour to get the best Sets you can, and from the best and largest sorts of Liquorice. The best Sets are your Crown-sets, or Heads got from the very top of the Root, a little shived down; be careful of this, of very sound Land; for how soon soever you come to water, your Liquorice will check and run not one Inch further: And having procured your Sets, your Ground being cast into Beds of four foot broad, all along your Plantation, from one end to another, with a long Line, you may lay down a Set at every foot along the Line, which Line may have Knots and Threads at every foot, if you will be so exact, and then a man may come with a Tool made a little flattish, or roundish, of the breadth or bigness of a good Pitchforks tail, about half a yard long, with a Crutch at the over-end, and sharp at the nether, and that thrust into the ground, it being made of Wood, or Iron: But if flat, an Iron will do best, and open the hole well, and put in the Set, and close a little Mould to it, and so you may over-run an Acre very quickly in the setting of it, and if it should prove a very dry time, you must water your Sets two or three days at the first, until that you see that they have recovered their withered wanneness; and then the first year you may plant your Garden with Onions, Radishes, or any Saller-herb, or any thing that Roots not downward; and I am confident it would be better too, because it will prevent some weeding; and for the second, it must be Hoed and kept from weeds too, and a little the third; but one thing be very curious of, in the taking up, and sudden setting of thy Sets, as soon as took up, set again: but if you fetch from far, then as soon as taken up, put a little Mould,

Mould, and poste them away by Horse-back, and get them into the Ground as soon as possibly; the delay of setting spoils many thousand Sets. The seasons of planting is in the Months of *February*, and *March*: You may the second Year take some Sets from your own stock, but be very curious thereof: But the third Year you may take what you please; and in the taking of the Liquorice up, the best seasons for which is *November* and *December*, there will run from every Mutter-root, a Runner, which runs along the over-part of the Ground, which hath little sprouts and Roots or Sciens, which will yield excellent Sets, if they be cut three or four of them in every Set, which may be about four or five Inches long, which is also to be planted, and is as good as the Crown-set; also if it be any thing a moist time, you may take slips from the Leaf or Branches, and set them, and then some of them will grow; but they may be set betwixt the other to thicken, lest they should fall. The third Particular, is the Profit and Advantage that may be made thereby, which is very considerable; but it is also subject to the Ebbings and Flowings of the Market. It must be taken up in Winter, and must be sold as soon as taken up, lest it lose the weight, which it must needs do: You may make of an Acre of indifferent Liquorice 50, or 60 *l.* Land of excellent good, 80, 90, or a 100 *l.* It is not of so great use as other Commodities are, and so will not vend off in great parcels, as others will, neither will it endure the keeping for a good Market, because it will be so soon dry,

*How good a Commodity Hemp is, with the manner of Planting of it.*

**H**emp is an excellent Commodity, and would be far better, but that it is not made so National. This Staple-Commodity in the product would bring a constant profit for the stock, and would maintain the poor at work, so as to get a competent Livelihood. Why should we run to *France*, to *Flanders*, and to the *Low-Countries*, for Thread, and Cloth of so many sorts, and fine Linnen, when we have Hemp and Flax enough of our own? I shall now proceed to a brief Description of the way of raising it. As for the seed of it, that is familiarly bought and sold in all places, in the season; but the best seed is your brightest, which you may try by rubbing of it in your hand; if it crumble with rubbing, it is bad; but if it still retains its substance and colour, it is good. The best Land for it, is that which is Sandy, or a little Gravelly, so it be very rich, and of a deep soil: As for your cold Clays, they are not fit for it, the very best Land can be pickt for it, is but good enough. The quantity that is to be sowed upon our Statute Acre, is three Strikes, or Bushels, and Harrowed with small Harrows, the which after the Land is made exceeding fine, as the finest Garden; then in the beginning or middle of *April*, is the time they sow it: Some sow it not till the end of *April*: But if it be any thing a kindly Year, the earlier the better, and so preserved exceeding choisely at first, for fear of Birds destroying of it, as you see in many Countries. Be careful that Cattel never bite it, nor lie upon it, for they will

will destroy it. The season of getting it, is first about *Lammass*, when a great part of it will be ripe, it may be about one half, that is, a lighter Summer-Hemp that bears no seed, and the stalk grows white and ripe, and most easily discernable, which is about that season to be pulled forth and dried, and laid up for use, or watered and wrought up (as all good House-wives know) which you must pull as neatly as you can from amongst all the rest, lest you break it; for what you break, you utterly destroy, and then you must let the other grow for seed until it be ripe, which will be about *Michaellmas*, or a little before. When seed and stalk are both full ripe, and you come to pull them, you bind up in bundles as much as a yard-hand will hold, which is the Legal measure; but for your simple or Summer-Hemp, that is bound in lesser bundles, as much as may be grasped in both your hands; and when your Winter-Hemp is pulled, you may stock it up, or barn it, any way to keep it dry, and then in the season of the year, threth it, and get out the seed, but still preserve your Hemp till you set to the working of it, which instead of breaking and tawing of it (as they do in most parts) there they altogether peel it, and no more, and so sell it in the Rough: But I leave all at liberty for that, whether you peel or dress it up by Brake or Tewtaw. As for the Seed an Acre will bear, is two or three quarters, and it is usually sold for about a Mark a Quarter, sometimes ten shillings. If good Hemp, then store of seed, else not; but in many and most parts of the Nation, it is sold for about four shillings a Bushel: your Fimble-Hemp is not worth above half so much as the other; sometimes it is subject



to Weeds, to Carlock, and Muckle-weed, which must be weeded; but the best way to destroy them, is to let your Hemp-Land lie one year fallow: I only speak of *Holland*, the cheapest place for it, and the first fountain of it: But generally throughout the Nation, it is of far more worth and value. The richer your Land is, the thinner; the poorer, the thicker you must sow. One Acre of good Hemp may be worth 5, 6, 7, or 8 *l.* an Acre, and sold as soon as pulled or gathered; but if it be wrought up, it may come to 8, 9, 10 or 12 *l.* or more: It is a common thing in use, every one knows the manner of working it to Cloth.

*The Husbanding of Flax so as to make it come up to as much of the Improvement as we can.*

**F**Lax, as I may call it, is a Root, or foundation of advantage, upon the prosperity whereof, thousands of people in good, honest, and laborious Callings, are maintained; for the profit accruing thereof, is both general and particular. For the Land capable of raising good Flax, is any sound Land, be it in what Country soever it will, if the Land be good, either earthy, or mixed of Sand or Gravel, and old Land; it is best, that hath lain long unplowed, it had need come up to the value of a Mark, or near twenty shillings an Acre to sow Flax upon, within a mile of *London*; and yet in most Counties of *England*, I know as good and as kind Land for that Husbandry, as any other; and at *London* they have Workmen dearer too, and yet can raise (though they give so dear) a very considerable profit. There is excellent Flax about *Maidstone* in *Kent*, 'tis said the best Thread in *England*

land is made of it; one Acre of good Flax may maintain divers persons, to the compleating of it to perfect Cloth; consider how many Trades are supplied thereby. 1. The Flax-Land must have the same Husbandry of plowing and sowing, as Lands have for Corn; there's the Husbandmans business sometimes, yea, many times weeding too, then pulling, stiching, and drying, then repelling, and laying up, and preserving the seed, then watering is either on the ground or in the water, then drying of it up, hoing of it, then breaking and tow tawing of it, then better helling and dressing it up, then spinning of it to Yarn or Thread, then weaving it, and bleaching, and then it returns again to the good Housewives use, or Sempster, and then to the weaving and usage; and all these a dozen good Callings. 2. For the carrying on of this design, and making the best of this Improvement, I will here give you the best and most profitable way of planting of it, that is discovered. As for the Land, let it be good, and well ploughed, both straight and even, without balks, and in due season, about the beginning of *March*, or latter end of *February*: and as for the Seed, the true East Country-seed is the best, although it cost very dear; one Bushel of it to sow, is worth ten Bushels of our own Country-seed; but the second Crop of our own, of this Country-seed, is very good, and and the third indifferent. but then no more; but again to your best Seed: The quantity of it is, about two Bushels of it upon an Acre at least, some sow a Peck more; but I conceive two may be enough, but of our Seed it will require half a Strike more than of the East Country-seed; Our Flaxmen



men in former daies did not sow above half so much, or little more; but now Experience hath brought us to this pitch. The season of sowing it, is a warm season, in the latter end of *March*; but in the warmer parts, as *Essex* and *Kent*, I conceive mid-*March* may do well; but in colder parts, as down towards *Warwick-shire* and *Worcester-shire*, the beginning of *April* may be early enough; and if there should come a very wet season, you must take care of weeding it also, that it grow not till it be over-ripe, lest the stalk should blacken or mildew; yet to its full ripeness you must let it grow, the which you may perceivè, both by the hurle, and by the seed. Some will ripen earlier, and some later; but against it be ripe, be sure to have your Pluckers to fall in hand with plucking of it, and then tye up every handful, and set them upright one against another, like a Tent, till they be perfectly dry, then get it all into the Barn. It is indifferent whether you ripple it, or take off the boles of it, as soon as you bring it home, or when you intend to use it. As for your watering of it, whether in the Water or upon the Land, that I shall not peremptorily determine; but thus much I say, that both may do well, and he that gets store, will find use of both, because of the one you make use as soon as your Flax is pulled, and then you need not stand so curiously upon the drying of it; but after you have got your seed, you may water it, and the watering of it opens and breaks the hurle the best; but then you must be careful of laying up your seed, that it heat not, nor mould, and that which you water then, get it forth upon your Grass-Land, and spread it thin, and turn it to preserve it from mildewing

dewing, and keep it so until you find the hurle be ready, and willing to part from the Core, and then dry it up, and get it in for use. And for the drying of it, a Kilne made on purpose is best, so that you be careful of scorching it, this will make a greater riddance of the same, and to them that have great store, Sun-drying will never do the feat, though it may do well for a small quantity, or the Flax of a private Family. As to the working of it, you must provide your Brakes and Tewtaws both, the one, that is, the Brake which bruises and toughens, the Hurle and the Tewtaw that cuts and divides out the Core; if you use the Tewtaw first, it may cut your well-dried Flax to pieces; yet both do well, but use the Brake first. It will cost the Workmanship of it betwixt three or four pounds an Acre, to bring it up to Sale: It lieth much upon the Workmans hand, and therefore far more to be advanced, by how much the more it raiseth employment for so many people to live by. Where Wages are great, it comes off the hardest; yet where it is carried on to the purpose, people stock hard that want Work, and because of constancie, will work on easie terms, or else how could they possibly do good of it at *London*, or near about it, where they work at double Rates? but there I have seen the best Flax I ever saw. Lastly, the benefit that may be made thereby, an Acre of good Flax may be worth upon the ground (if it be the East-Country-seed) seven or eight, yea, possibly ten or twelve pounds, yea, far more, the charge whereof, besides the seed until it be ripe, may not be above ten shillings an Acre, which if you work up to be fit to sell in the Market, it may rise up to 15 or 16,  
or

or near 20*l.* in the-Market; but to bring it so high as 30*l.* as in *Flanders*, I dare not say. But an Acre of our Country-feed, will hardly come up to above three pounds or four, unless very good indeed, to which if it amount, and no more upon the Land, it will make a good advancement of it; which it may be, Land, and Seed, and all Charges, may come to about fifteen or sixteen pounds an Acre, the seed not being worth above two shillings a Strike.

*A discovery of Rape and Coal-seed's Husbandry.*

**T**He planting of Coal-seed, or Rape-seed, is another excellent good means for the Improvement of Land: This Coal-seed hath been of late daies in good esteem. And it is most especially useful upon your Marsh-land, Fen-lands or upon your new recovered Sea-land, or any Lands that are very rank and fat, whether Arable or Pasture. The best seed is the biggest, the fairest seed you can get, it being dry, and of a pure clear colour, of the colour of the best Onion-seed. It is to be had in many Parts of this Nation; but *Holland* is the Center of it, from thence usually comes your good seed. The season of sowing it, is about *Midsummer*, you must have your Land plowed well, and laid even and fine, then you may sow it; about a Gallon of seed will sow an Acre, the which seed must be mingled (as afore was directed about the Clover) with something, that you may sow it even, and not upon heaps. The even sowing of it is very difficult; it grows up exceedingly to great Leaves.

Leaves, but the benefit is made out of the seed especially. You may sow it either upon the Lay, Turfe, or Arable, and both may do well; but your Arable must be very rich and fat, having made your Ground fine and fit to sow it. The time to cut it, is when half the seed begins to look brown; you must reap it as you do Wheat, and lay it upon little Yelms, two or three handfuls together till it be dry, and that very dry too, about a fortnight will dry it, it must not be turned or touched, if it be possible, for fear of shedding the seed, that being the chief profit of it: It must be gathered in sheets, or rather a great Ship-sail Cloth, as big as four or six sheets, and so carried into the Barn erected on purpose, or that place on purpose designed to thresh it that day; you may have sixteen or eighteen men at a Floor, four men will thresh abundance in a day. I have heard that four men have threshed thirty Coomb in a day. The seed is usually worth 16*s.* a Coomb, that is, four shillings a Bushel, sometimes more, and sometimes less. It will, if exceeding good, bear Ten Coomb upon one Acre, and raise a good Advance upon your Lands. It is a Commodity will not want of Sale, the greater the Parcel is, the better price you will have. It is used to make the Rape-Oyl, as we call it. The Turnep-seed will grow amongst it, and it will make good Oyl also, you may sell a Thousand pounds worth together, to one Chapman: It is best to be planted by the Water, or near it. It cannot be too rank, the Eadish and Stubble will exceedingly nourish Sheep in Winter. It hath another excellent property, it will fit the Land so for Corning; for Wheat it may produce a Crop as good, or better than it self, and for Barley after it.

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The Charge of the whole Crop, I conceive may come to betwixt 20 or 30 s. an Acre, and a good Crop may be worth 5, 6, 7, or 8 l. an Acre; the least is a very good Improvement, because it will do excellently well, if well ordered (and a kind season upon the Land, the very first year after Recovery, when it will do nothing else, if it can be but plowed) when other things, as Corn and Grain may be hazarded.

*Of Weld or Would, as some call it, or more properly Dyars-Weed.*

**I**T is a Dyars rich Commodity, it beareth a long, narrow, greenish, yellow Flower, which runs to a small Seed, far smaller than a Mustard-seed, very thick set with seed. *Pliny* calls it *Lutea*, but *Virgil* calls it *Lutum*, and in our English, *Weld*, *Would*, or *Dyars-Weed*. It flourisheth in *June* and *July*. In many places it groweth of it self, in and about Villages and Towns, and is of a very great use, and considering the easie charge of the raising of it, and the hardness of the Land upon which it grows, is of incomparable advantage. For first it wil grow upon very indifferent Land, not worth above ten groats or half a Crown *per Acre*; yea, as some affirm, the veriest hilly, barren, chalky, light Land, not worth twelve pence *per Acre* will carry it, and bear it to very good purpose; but unto so barren Lands, I will not give encouragement, unless where there is little or none better; but in any indifferent Land, so it be of a very dry, warm nature, it will do very well. And secondly, it will cost but a little the managing, it requires no Tillage at all, no Harrowing, it being  
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to be sowed where you sow your Barley or Oats, upon that Husbandry, without any other addition, unless you draw a Bush over it, or a Roul, either of which is sufficient to cover it after you have sowed it. The difficult piece in the managing hereof, is the very sowing of it, that is, that it may be sowed even; for the seed being so very small, will require both skill, and an even hand to scatter it: Some sow it by taking it with one finger and the thumb; others with the two Fore-fingers, but neither of these do I affect as the best way, because they cannot spread so well as they may with their whole hand: I therefore prescribe a mixture with Ashes, Lime, fine Earth, or some such thing as will best suit with the weight of the seed; for could you find out that which agreeth both in weight and bigness, then out of all question, none like to that to sow it withal. A Gallon of this seed will sow an Acre, which had need to every quart of seed, to have two Gallons of some of the aforesaid. It must be often stirred together, lest that the seed sink to the bottom, and sow that part thicker than the other, and then cast it out at Arms-end, at as good and even a compass as you can. The seed thus sowed, may grow up amongst the Corn, and yet be no prejudice, because it groweth not fast the first Summer; but after the Corn is cut, it must be preserved. And the next Summer you shall receive (through Gods Blessing) a comfortable Crop: You must be exceedingly curious in the ripening of it; if you let it grow too long, your seed will fall out; if not long enough, your seed will not be perfect, nor your stalk neither, and therefore observe both the turning of the seed, and the ripening of the stalk; for  
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I cannot tell you which of either will admit of a dispensation; and as soon as ever you perceive it to grow up to perfect ripeness, you must down with it, that is, pull it as you do your Flax, up by the Roots, and bind it in little handfuls, and set it up to dry in little filches or stich, until both seed and stalk be dry, and then carry it away carefully, as that seed be not lost; lay it up dry, and so keep it as you see cause, for a good Market; for it is to be sold for the Dyers use, who sometimes will give a very good price, but at all times sufficient profit, and go far to buy it, from forty shillings an Acre, to twelve pounds an Acre, some say more; you may barn it up, and keep it, and the seed together until *March*, and then you may get out the seed by lashing and whipping of it forth upon a Board, or Door, which reserve for seed: The seed is sometimes Ten shillings a Bushel, and sometimes more or less, as the Market rises or falls, it coloureth the bright Yellow, and the Limon-colour. The Stalk and Root are both useful, and must go together to the Dyer. The Charges of sowing, and all things till you come to pulling, is not above one shilling, whipping and barning may come to four shillings more; the seed may be worth half a Crown, so that all Charges and Rent of the Land may amount to less, but I will say Fifteen shillings, then the Improvement will be four-fold; if worth Four pound Ten shillings an Acre, six-fold; if worth Six pound *per* Acre, eight-fold, and much more, as some affirm to sixteen-fold Improvement. It begins well, and spreads and thrives very much in *Kent*, in many parts thereof; the best place to get the seed is in *Kent*, clean down to *Canterbury*, and

Wye,

Wye, where you may see both the Land and the Growth, and discover the Myserie thereof. It is sold by weight, so much a Hundred, and so much a Tun weight.

*Of Woad, or Wade, the Land best for it, the Usage of it, and the Advantages thereby.*

**W**oad is also a great Commodity, it lays the foundation for the Solidity of many Colours more: A Woaded Colour is free from staining, excellent for holding its colour, nay, sad holding colour must be woaded. It hath been one of the greatest Inrichments to the Masters thereof, until our late Wars, of any Fruit the Land did bear. It is called *Glastum*, or Garden-woad, by the *Italians* called *Guedo*; in *Spanish*, and in *French*, *Pastel*; in *Dutch*, *Wert*, and in *English*, *Woad*, or *Wade*. It hath flat long Leaves like *Reben Rubrum*; the stalk is small and tender, the Leaves are of a blewish green colour, The Seed is like an Ash-key, or seed, but not so long, little blackish Tongues. The Root is white and simple. It is a very choise Seed to grow, and thrive well; it beareth a yellow Flower, and requires very rich Land, and very sound and warm, so that very warm Earth, either a little Gravelly, or else Sandish, will do exceeding well; but the purer, warmer, solid Earth is best, and exceeding rich Land, and though it should be mixed with a little Clay, it will do well, but it must be very warm. There is not much Land fit for this design in many Countries, especially your hardest Wood-land parts, you have in many of your great, deep, rich Pastures, many Hills and Hills-sides good

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Woads

Woad-Land, when the Bottom-ground will do no service; but your chiefest is your home Corse, or lesser Ground lying near, and bordering about the Towns. Your best and Naturallest parts in *England* for Woad, are some parts of *Worcester-shire*, *Warwick-shire*; Southward, *Oxford-shire*, *Glocestershire*, *Northampton-shire*, *Leicester-shire*, some parts of *Rutland*, *Bedford-shire*, and *Buckingham-shire*, and some other places here and there: All these Parts have some admirable Woad-land in them. The Land must be sound, and at above twenty shillings an Acre to graze in at least, or else it will not be worth the woading. And to plow and sow woad, it may be worth as much more as to Graze, yea, sometimes more, if it be extraordinary rich Soil, and Trading good. And whereas some write, that it undoeth the Land; I answer as I judge in my own Breast, that in regard it is so often cut, and groweth so thick, and is so often weeding, that it must needs do so, as I believe all Corn doth draw out some of the Spirit thereof; but no more than other Grain, if it could be so oft cut to grow again. Thus much I can say of it, that it prepares the Land exceedingly for Corn, and doth abate of the strength and Super-richness, or Rankness thereof, which Corn would not well endure; for I am ready to maintain, that the richest Land is not best for Corn: For though the one may over-burden, and be so Rank; yet the other may bear as much to the Strike; and for Goodness, your Middle-Land beareth the Bell away for Corn, in my Opinion.

To acquaint you with the use of Woad, I must do these three things. 1. Shew you how the Land must be prepared and sowed. 2. Shew you how

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it must be ordered, when that the leaf must be cut, and how ordered after the cutting of it. 3. And lastly, how it must be tempered and seasoned to make the best Woad for use and profit: But before I proceed, I must inform you, that this commodity is not to be played withal, as you may do with Liquorice and Saffron, &c. to make Experiments of a little parcel; but a man must of necessity set forth and forward so much stock, and land, and seed, as may keep one Mill or two at work to make it into perfect Woad. It is the doing of a great quantity, and carrying on a great stock that makes this work, and will carry it on to profit and credit: Some have as much under hand, as will work six or eight Mills. The charge of it is exceeding great in the management of it, and as well it payeth for all charges, as any Commodity I know of. The Ground must be of old Land, as aforesaid, and a tender Turfe, and must be exceeding choisely plowed, if very hilly, they must be cast, and well cast, that that you cast forth, lye not high to raise the Furrow: They usually plow outward, or cast all their Lands at the first plowing, and having broke the Ground with a Harrow, then they sow it, and sow about four Bushels or Strikes on an Acre, which done, then cover it, and harrow it very well and fine, and pick out the Clots, Turfes, and Stones, and lay it on the hollow places of the Ridge in heaps, as is the usual custom: But now I should rather chuse to take a little Cart with one Horse, and as the Boys and Children pick them up, cast them into the Cart, and carry them into some flank and hollow place, and lay them down to rot, or else mend some barren place, because they lose a good considerable

part of Land, and so of Woad too, which otherwise might be as good as the rest, and is now, by reason of the times, not worth so much. The Land that is lost is very considerable, in regard it is so good of it self, and the stock so good and rich that is sowed upon it, that all even Ground had need be regained, that possibly may be. 2. I am to shew you how it is to be husbanded, and when the Leaf must be cut, and how used, and how oft, &c. After the Land is sowed, and that it begins to come up, as soon as any Weed appears, it must be weeded, yea, it must be twice weeded, or more, if it requires before it be ready to cut; but if it be special good, and comes thick, and cover the Ground well, it will ask the less weeding: To them that are exercised in this same Service, and have their Work and Work-folks at command, they will have it weeded for eight pence an Acre, and sometimes less: as soon as the Leaf is come to its full growth, which will be sometimes sooner, sometimes later, as the year is drier or moister, more fruitful or less, which when you perceive at the full ripeness, set to cutting of it off. As soon as ever it is cut, your Mills being prepared, and great broad Fleaks, so many as may receive the Crop prepared, and planted upon Galleries or Stories made with Poles, Fir, Alder, or other Woad; your Mill is usually known, a large Wheel both in height, and breadth, and weight doth best, it is a double Wheel, and the Tooth or Ribs that cut the Woad, are placed from one side of the Wheel to the other, very thick, wrought sharp and keen at the edge, and as soon as the Woad is cut, and comes out of the field, it is to be put into the Mill, and ground, one Kilne full after ano-

another as fast as may be; the Juice of the Leaf must be preserved in it, and not lost by any means, and when it is ground, it is to be made in balls round, about the bigness of a Ball, without any composition at all, and then presently laid one by one upon the Fleaks to dry, and as soon as dried, (which will be sooner or later, as the season is) they are to be taken down, and laid together, and more put in their places: But because all the circumstances will be too tedious to discourse, and the work is no common work, and very many not well versed therein, I will rather advise you to get a Work-man from the Woad-works, which can carry it on artificially, rather then to venture the experimenting of so great Work upon Words and Rules. Good Woad may yield in a plentiful year five, or possibly six Crops, yea, ordinarily four, and yet sometimes but three: But the Winter Crop is of good worth, excellent for Sheep, conceived good against the Rot, and also it will maintain them well, and it will contain them in good heart, and strengthen them till sowing time again. The time of sowing is in the beginning and end of *March*. And thus when you have cut all your Crops one after another till Autumn, the declining season will not rise it again, and your Mill is at leisure, then you must proceed to the third Particular, which is to the ordering and seasoning of it, and working it up to use, which must be done in the manner following. You must set your Mills to work again, to grind it all over, and then season it up, and so you may make it stronger or weaker, as you may see occasion. There is so much difference between Woad and Woad, that the Dyers, though so experienced

tal, will hardly buy you any parcel till they have experimented it in colouring; and therefore for me to prescribe a Rule upon such uncertainties, I hold it not safe, the Woad-man that uses to make up three or four sorts of Woad, will make it up as he intends to be friend a Customer. The first years tryal will put you into sufficient Experience: As the Woad yields many Crops, so each Crop is worse than the other; the first Crop is best, the second next, the third much worse, the fourth far worse than that, and the fifth worst of all; if you get a fifth, but that is not usual, four Crops is sufficient, and sometimes you must be content with three, and as the first Crop is usually (in a good year) ripe by the midst of *June*, so will the second be usually ripe in one month after that, and so every month, or thereabouts, each Crop will be ready, and if the latter end of the year prove kind, then you must expect a Crop the more. Now to know when the Woad is ripe, and to take it in the very season, is a fundamental piece, which is when the Leaf is come to a full growth, and retains its perfect colour and lively greenness, then with all your might set so many hands to cutting of it, as that it do not fade, or wax pale or wan, before you have cut your Crop; for then it will begin to be over-ripe, and the less sap and marrow of it drinks in again, and will not yield store of Juice, which is the spirit of it, and best of the Woad. The VVoad-man seasons the two first Crops together, and some season the third by it self, and the fourth by it self; some put the three first Crops together, which makes the worser VVoad, but the very Virgin-VVoad is the first and second, and the better they desire to make it, the more

more intire they compound it, not confounding it with divers sorts. The manner of seasoning is thus; after every Crop is cut, grinded, balled, and dried as dry as possibly it can be, and laid up in the Ball, every Crop by it self, then you must take the first and second Crops, and grind them all over again together, or apart, as you please, but they must be then wrought as dust, as it were, in the Mill, and ground very well the first and second Crop, or so much as you will make of your best sort of VVoad, and so laid upon the floor in a heat or Couch, and then you must mix it with water, and turn it over, and mix it again, and turn it over, and give it so much water as that it will be soakt thoroughly, however you may over-soak and drown it. and that will be very prejudicial to it: It must be turned in the Couch once for three or four weeks together, and then every other day once for about a fortnight, and then twice a week, till it comes to a right colour. At the first many men must be employed, carrying water as hard as they can, till it be wet and well soaked, and that you may know the better how to temper it aright, you shall find it heat exceedingly in the Couch, which you must look to keep in a moderate condition, which overheating you may prevent with turning, that it overheat not by any means; it may grow so hot, as you can possibly abide your hand in it, but not to exceed that heat: And how to know it seasons kindly, and so will in time come to perfect rich VVoad; you must observe that it will alter and change divers times: First it will hoar, mould, and frost, and smell exceeding strong, and then it will in a little time abate thereof, and grow towards a



colour, and then it will hoar and mould again, and change a little whitish, and after this second change, it will come to a perfect black, which the brighter and clearer colour, the better. This must be the VVinters work, and it will be good for cold weather, and when it is thus wrought, and comes to its colour, then you may lay it up, or heap it up, to lye for a Sale, putting divers Poles into each heap, into the bottom, to open and keep it cool, and you must be sure it take not heat again; and thus all your sorts of VVoad must be seasoned one after another, and especially all such that you can dry that Summer: But to tell you how to chuse the best VVoad, is scarce in the power of the VVoad-man, who can but guess at it from that Experience he hath in the mixing of it; but it must be tryed by the Dyers, who, as we said, usually do so before they buy it. I shall end with the advantages thereof, which are very great. And first it is National, in that it sets many poor on work, It is the staple and chief of the Dyers Trade, layeth a foundation for all enduring and holding Colours, and much advantages Land in the Rent, it doubles or more, and in the usage of it upon this Husbandry, trebleth or quadrupleth it, and many times more: And then secondly, it is personally advantagious, the best Estates that have been got in all our rich upland Countries, have been got by it: At some seasons, and when they have a right Crop and good Markets, it will amount to as much more; it hath been sold from 20 to 30 *l.* the best VVoad, and back again down to 6 *l.* a Tun.

*The Nature, Use, and Advantage of Madder.*

AND so I descend to my third Dyers Commodity, in relation to Dying, or Colouring; and that is to the Story of Madder, that colours the rich and best solid red. It is now very rarely planted in Gardens, and in some small Plats of Ground, and it amounts to the very great Advantage of the Planters, that Set and Sell forth by the Roots they draw; to vend to the Apothecaries, and Medicinably to others; they make a most exceeding value of the Lands beyond all Credence: Some have made, as I have been informed, after the Rate of Three Hundred pounds an Acre in three years, for so long as it grows, before it come unto perfection; and others that have sold it by whole-sale, a parcel together at the worst Advantage, to an Hundred and sixty pounds an Acre, and some have out of small Plats of Gardens, made more than I have, or will here affirm; and however this being a fundamental Fruit, and such a one as that the plenty thereof will not much abate the Market, or dying Trade, being supplied herewith from beyond the Seas, that the Erection of such a Plantation as may bring it forth, wrought up and fitted to the Dyers use, and so to be a supply to our selves within our selves: It would be a good design to the Nation, as it Impleys so many hands to bring it to perfection. It turns Land to as great an Advantage as any Seed or Root that is capable to receive it, and needs no more fear want of Markets for the Vending of it, than we need for Wool, that Staple-Commodity of the Nation. I shall proceed to the Description of it. There is but



one kind of Madder', which is Manured and set for Use; but there are many things like thereto, as Goose-grass, soft Cliver, Ladies-Bedshaw, Woodroof, and Crosswort: All which are like to Madder-Leaves, and are thought to be wild kinds thereof. It hath long stalks, or trailing Branches dispersed upon the Ground, Rough, and full of Joynts, and every Joynt set with green and rough Leaves, in manner of a Star; the Flowers grow at the top of the Branches, of a faint yellow colour, after which comes the seed round and green: The Root creepeth far abroad within the upper Crust of the Earth, intangling one Root into another, and when it is green and fresh, the Root is of a reddish colour, it is small and tender, but gathers and runs into the ground, just like an Ivy along a House or Tree. It is a Commodity of much value, Patentees strove hard for it, and Patents were gained about it in the late Kings days. For the making out of a good Plantation, I must observe these three things. 1. Shew you what it comes of, how to plant it and preserve it. 2. How to get it and use it, to bring it to a saleable Madder. 3. The benefit and advantage of it will be National and Personal. Although it bear a seed, yet that seed comes not to perfection, it is therefore to be planted from the Sets that are to be got from the Madder it self, and they are to be bought in many Gardens in *London*, who keep up that Plantation for the advantage of selling their Sets, and Roots Physically to the Apothecaries only; all the skill is to distinguish of the goodness thereof: And for the discovery thereof, first know the season of getting, or rather drawing them, which is in *March*, and *April*, yea, as soon

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as they are sprung forth of the Ground two or three Inches long, then you must be careful to get Sets rooted; every Set having some suckers, or spinies of Root going out of them: They must be slipped from the main Root, and these Sets as soon as ever took up, put into some Basket with a little Mould, and posited to the place where they are to be set, the sooner the better; and then your Ground being very rich, it cannot be too rich for this Commodity, however it must be of a warm and a very deep Soil, and digged two or three Spades graft depth, and two shovellings also, raked and laid Even and Level, and then by straight Lines trod out into long Beds, about one foot broad from one end of your Work unto the other, and set about one foot asunder every way; and if it be a dry Spring, they must be kept with watering, until they recover their fading wan condition. You may begin to dig your Ground in the beginning, and along all Winter, till the very day of setting, and then you must keep it with Weeding and Hoing, until it have got the Mastership of the VVeeds, and then it being a VVeed it self, will destroy all others. One Rod of Ground is worth seven-pence a Rod digging; or if very dry strong Ground, eight-pence; but six-pence the best. You may sow some early Sallet-herbs, as Radish or Onions, or such things as will be ripe betimes, among it. The first year good weeding is the best preservative unto it, and in your setting them by a little Line, one goeth before, and laicth every Set in his place, and another comes, and with a broad Dibble made for the purpose, thrusts down a deep and open hole, and puts in the Set, and for the nourishing of it, in case any die, you must plant

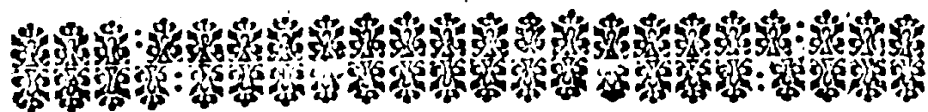
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new in the room of it; for the time of the growing of it, until that it come to perfection, is three years: The first year you may take off some few Sets, here and there, but that is somewhat dangerous; for that year, it must be kept with Hoing a while also, then the second year you may take up Sets as fast as you will, and almost as many as you will, leaving but as you do in the Cropping of an Oak, the bough for the drawing up of the sap out of the Root, being so thick and strong in the Ground, that nothing will almost decay it. If then you can get it for the use of the Drugsters and the Apothecaries, and the Set to plant again; in the taking up of every Root, there will be one Runner which hath little Buds on it, which may be divided and cut into a fingers length, each planted with one Bud out of the Ground, set upright, which makes very excellent good Sets, one Runner will make many Sets; but these Sets cannot be got up until the Madder be taken away: And having thus preserved it until it come to a good Crop, having curiously dried it as you do your Hops, to a just and perfect gage of drought. There is a Mystery, that is, to pare off the husks, that it may, if it be possible, as the VVheat is ground, be flaked, or flayed, that it may go all one way, which sort they call the Mull-Madder, is little worth, not above Nine or Ten shillings a Hundred; and then you must take out the second sort, called the number O, which is the middle Rinde, and is not worth so much as the third sort, called the Crop-Madder, by one sixth part; and this Crop-Madder is the very heart and pith of it, inclining to Yellow; this is lesser in quantity, but little, better in quality by far. Sometimes the

best

best Madder is worth 8 or 9 *l.* a Hundred, and the number O, is worth 6 *l.* 6 *s.* 8 *d.* sometimes it is not worth above 4 or 5 *l.* a Hundred. Some Dyers use of this Commodity, above an Hundred pound a VVeek a man. Now as it is planted in Gardens, unspeakable Advantages are made thereby, and should it hold a proportion when it comes to be made up, and compleated to the Dyers, it would prove the richest Commodity that I know sowed in England.

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THE YOUNG  
GENTLEMANS  
Heroick Exercise;

OR THE  
Perfection of Horsemanship,  
Drawn from Nature, Art, and Pra-  
ctice of Riding.

**B**Efore I enter into the Unfolding of the Parts of this Art, I do think it fit to shew the Natural Instinct and Temperature, that ought to be in every Perfect Rider. He must be a Person void of Fear; for, the true Properties of his Fortitude should be to Guide his most noble Nature, through hard and difficult things, to the Attaining of the End of his Heroick desires; because the perfection of every good Undertaking consisteth in this, that it be done by a steady and constant Reason, without Rashness. And because every Rider is a reasonable Creature, he therefore ought to be able to

to yield a constant Reason without any Contradiction, as not subject to any prejudice of the Inquirer, for that he only teacheth by Reason for what he doth, an Inherent property peculiar to Man; yet it cannot be truly said, that every Reasonable Man is a perfect Rider, because every man hath not attained to the reason of the Art, and therefore unable to teach, *Nam quod nemo didicit, nemo docere potest*: For no man can Teach what he hath not Learned. And though it may be confessed, that every good beginning cometh unto us by Nature; yet the growth and progress thereof, we attained unto by Precepts of Reason, and the accomplishment by knowledge and Practice: For Nature without Knowledge is blind, Knowledge without Nature falls short, and Practice without the former is Imperfect.

From hence it proceeds, that unless Nature, Art, and Practice be conjoyned, it will be impossible to be a good Rider, to be able to know how and when to help his Horse, the only principal things required in a Rider that is enriched with Nature, Art, and Practice; and yet if he be so qualified, and bestow all his Labour and Skill upon a Jade; let him assure himself he shall *Oleum & operam perdere*, but lose his Labour. For although every Horse be a sensible Creature, moved by Sense and Feeling, as things proper to his Nature, and taketh his Instruction by Speech, as Man instructeth Man; which is either by encouragement, or cherishing him when he doth well, or by Punishing him when he resisteth his Discipline; yet nevertheless when a Jade begins to be taught, and proceeds with a continual perseverance therein, yet shall he never attain the perfection of Action, because all Art must imitate the Na-

Nature of the Horse, which to content and please, is the end of the whole Art: But where contrary Natures are, there of necessity must be contrary workings, and then must needs ensue contrary effects; for every Creature worketh according to its Nature. For amendment whereof, the Ignorant and pretended Rider proceedeth to violence, which the Nature of the Horse abhorreth, as a perturbation; for then his Riding becometh grievous and painful, so that he knoweth not what to do, no more than an untowardly Scholar, by whipping to say his Lesson delightfully; and were it granted, that the Horse were of a good disposition to yield all obedience to the most skilful Rider, yet shall he never attain to any perfection of Action, because Nature hath not shaped nor given him aptness fit for such a purpose, no more than a natural Fool by Education can attain unto true Wisdom. And yet few Riders neither have, nor do truly judge hereof; for that nothing is more manifest in all their Writings and Actions, than provision and means to make perfect that which is most imperfect by Nature, as though they had never learned that Art, can never overcome the necessity of Nature: Wherefore I desire all such as wish and desire to be good Riders, first to examine their own natural dispositions. Secondly, to learn to know the true and perfect shape of Horses. Thirdly, the natural Causes of their Goodness and Badness. Fourthly, to be taught by an understanding Master, and not to begin without his direction. Fifthly, to practise, and alwayes to examine the reason of his Practice, then shall he see what a Hand-maid all Art is to Nature; then shall he discern in the beholding of the Actions of the perfect shaped

shaped Horse to be easie, quick, and ready according to his perfection of Nature, as true qualities bred and brought forth by Nature, not by correction, but with all mildness and gentleness, voluntarily performed, the which all true and natural Riders will and ought altogether to cherish, seeing all Horses do in that bountiful form, that he himself doth expresse, when he desires to appear most comely and just in his Pace, just in his Trot, just in his Gallop, just in his Carriere, just in his Head, just when he standeth still, just in union with the will of the Rider, his Head and Neck will be so justly and rightly placed, of such staidness, and his Mouth of such a sweet and perfect composure, as it seems as if Nature strove to set forth her own glory: All which some call Natural, and not so much Accidental in a perfect and a true shaped Horse.

It remaineth now to discourse of those things which most principally are required by the Art, for the true performance of such Actions as Art requireth, either for helps, corrections, or cherishings, for reducing the Horse to perfect Action, fit for the most gentle use of man.

For he that knoweth how to correct and cherish a Horse in his due time, is, and so ought to be accounted, the most grounded in this Art, the which cannot in a small time either be attained or performed; and therefore for the true attaining thereof, I wish that none undertake the same, as I said before, but by the direction of an expert Master, lest it be said to him, as *Timothens* the best Player on the Flute, of his time; who when that he took a Scholar, used to demand of him, Whether he had made an entrance into that Play; which if he had, he took a

greater reward by half, than he did of them that knew nothing, saying, That his pains were greater to take from him what was unskilfully taught him, than in teaching that which was good to such as understood nothing at all thereof. The things that are principally to be used for helps, are, as hath been said, corrections and cherishings, which may be contained in these three heads, *viz.* the Voice, the Hand, and the Leg; because the Voice by words of Art helpeth, and with mild, meek, and gentle words cherisheth, but by loud and taunting terrifieth and correcteth. The hand (being the Instrument of Instruments) upon the true use whereof the ground of the Art resteth, by the temperate and sweet stay thereof, it helpeth: By clawing, or gentle putting to the Horse, it cherisheth, and by correcting or striking, frighteth. Again, the Hand by the stroke, jerk or sound of a Rod, or VVand, is sometimes very useful, it often helpeth by practising mildly and gently with it, clawing and scratching the Horse, it encourageth and cherisheth him; but by striking him too hard, correcteth to his displeasure. Again, the hand with a Bridle, in slackening it, easeth and cherisheth him, and by drawing it hard, oppresseth and correcteth him, by the guiding thereof, it governeth a Horse, as a Stern doth a Ship, which in all motions and actions answereth to that motion which the hand moveth. The Leg, when it gently provoketh with the Calf, helpeth, the Spur also by gentle means helpeth, and when there is a just occasion by hard strokes correcteth; so as to bring a Horse to true obedience and perfection of action, he is to be corrected, helped, and cherished; he is to be directed or helped, to the end he should not erre, therein is great

great knowledge required: He is chearfully to be cherished for his well doing; to accomplish which, knowledge, Reason and Experience are required whereby appeareth how every good Rider ought to be qualified; of which, namely, the Voice, the Hand, and the Leg. Before I come to speak of Action, wherein the true understanding hereof is most proper, I do purpose to give a little further Instruction, and first of the Voice. VVhen you mind to help your Horse therewith, it must be with a most mild and chearful one, as to say, Hey, Hey, Hola, Hola, so Boy so, Hup, Hup, enough, enough, no more; and many such like: But a correction is clean contrary, which is with a terrible thundering Voice, as Villain, Traitor, and many such like, whereas in cherishing, the most mild and sweet Voice is used, as my good Boy, so my good Boy, with an inclination of bending your body to him, and such like encouragements; so as also the sound of the Voice is to be used, as well as a Voice pronounced, by giving a Chirk with the Tongue, which may be called Clacking, in pronouncing whereof, the tip of the Tongue striketh the roof of the mouth, as it doth in making the supposed sound drawing near the Greek word *Clogmus*, and so also there is another sound of the Voice to be used, as Hey, Hey. The next is the Hand, which, as I said, is the Instrument of Instruments, in the true use and government whereof, is the ground of the whole Art; and as for the Bridle and the Rod, they are but dead and senseless Instruments, without all use, when they are not appointed for the right use, of the temperate and steady hand bearing up a firm moderate stay, nei-

ther too much flacking, nor too much drawing in; every good Horse causeth a true and a just rein, a just bearing, a just staidness, with a light and sweet mouth in all actions: so as whatsoever the Horse doth, is both easie, ready, and perfect, and being done with delight, must of necessity be best done, because it best pleaseth both Man and Horse, neither of them being moved to any perturbation, grief, or pain: And as for the Rod and Wand, being Instruments only for the hand, how and when they are to be handled, offered, used, or not used. And for the Bridle which the Italians properly call *Il Mani-co del Timone*, the handle of the Stern: We shall for the present pass them by.

The third thing is the Leg, wherein the use of the Calves of the Legs, the Heels, the Stirrup, and the Spur are to be handled; I shall, to avoid repetition and all manner of tediousness, refer them also to their proper place. And I shall for the present divide this our immediate Concernment into certain prescript, general Grounds or Rules, to follow which, the Rider shall find of daily use in teaching the whole Art to his Scholars and Horse.

First, when the expert Rider beginneth to teach a young Scholar, let him follow the Order of the discret School-master, that teacheth Children to write, who inviteth them with his gentle usage to the Pen, Paper, and Ink, and in a most mild and civil manner, teacheth them how to use their arms and hands, and how to hold their Pens; and then how to make the first Letter, the which when the Scholars attempt, though it be very bad; yet in respect of the infancy of their knowledge; and willing minds to do better, they are not only commend-

ed,

ed, but rewarded for doing so; the Scholars being thus encouraged, desire to go on to be taught to make many Letters, and then after in a gentle and slow manner, he teacheth them perfectly how to joyn their Letters. Even so should your Scholars be taught in Riding, and young Horses in their beginning to be taught, whereby all their Actions might bring delight and admiration to their Beholders. For mild teaching, slow, teaching not too much; (for a Horse may be wearied with too long teaching at one time) but giving him often breath, high keeping in courage, often rewarding, cherishing, great familiarity, no change of the Rider till he be perfect, no change of Bit, no rough Bit, no cutting or galling of his Nose or mouth, but gently feeling, no beating or whipping, no violence, no passion, but with all manner of Natures delight, make the Horses actions more than wonderful, because Nature hath a natural love to it self, and an innate hatred to all things that are enemies to the same, which is plainly testified by that natural Sympathy and Antipathy, which may be observed in all Creatures, as the Lamb which never had Experience of the Wolves cruelty; yet at the first sight of him, doth tremble and flie for fear.

## CHAP. II.

*Of Correction.*

SEcondly, that the Rider never doth correct his Horse, but when gentle means and cherishing will not prevail; for no doubt but that he will willingly yield by gentle means, if it be sensible to him, what, how, and when to do: But that Horse that will not be moved by gentle means, let the Rider assure himself he is of a bad Nature: But if any thing shall happen wherein of necessity Correction is to be used, then let *Solomons* direction be followed, who, as he was the wisest man that ever was, or shall be, so did he keep more Horses than any King, that History mentioneth, who saith, That an untamed Horse becometh fierce: But if he offend, in the instant time that he erreth, correct him; wherein how many do offend, all mens Eyes are witnesses, beholding the common Horse-breakers and ignorant Riders to minister horrible and most violent Corrections, when the Beholder cannot so much as see a cause, nor himself express a reason, but error evermore taketh that for truth which is false: So as it plainly appeareth, that when a Horse hath been taught, and yet notwithstanding erreth in his Discipline, that he hath been truly taught, *Solomon* would have him in that instant time punished for that error, but not to correct him for ignorance, which renders the Rider either to be mad, or as ignorant as a Horse.

## CHAP. III.

*That Teaching is not fit for such Horses as Nature hath not framed fit to be Taught.*

THirdly, that all Riders lose no time in Teaching of good Horses; but as for those Club-headed, Distorted, Ugly-countenanced, Flethie, Gourdy-limbed, Short, Thick-necked, Low-foreparted, Narrow, Shallow-breasted, and Evil-shaped Jades and Roiles, turn them either to the Carts, Car-men, or *Paris-Garden-stable*: For in every particular Nature (that is the temperature of the Elements in every particular body, without all contradiction) causeth and maintaineth the particular actions of the body wherein it is: And that such shaped Horses were never compounded or framed of a true Temperature of the Elements, and therefore impossible to be reduced to the perfection of action, otherwise than by abuse and great force, Nature abhorreth. And that is but for a small time, such Carrions as these made use of also, do shadow the Glory of the Kingdom, disparage the Judgment thereof, discourage many Noble and Heroick Gentlemen, either to become Breeders, Riders, or Maintainers of Horses; and lastly cast mists over the Perfections of our English Riders.

## C H A P. IV.

*Of the English Bridle, Saddle, and bringing of the Horse to the Block, the Mounting and Seat of the Rider, and of the Execution of the Action, of Teaching of the Art.*

**W**Hen the Horse is made Gentle, Familiar, and fit for the Rider to Teach, put on a Head-stall, or a Cinetane over his Nose, with a pair of strong Reins, but so loose and easie for his Nose, as may neither hurt nor abate of his Courage, or his quick and fresh feeling; and in a most gentle manner, set a Saddle upon him, with an upright short Pommel, so as that the true use of the hand may not be hindred or injured, the Bolsters whereof should be broad in the top to inclose the Thigh, and yet to bear so slope, that the Knee be not pinched, nor the Thigh kept from the true resting place, the Seat whereof should be of a reasonable length and largeness, the Bolsters behind bearing forward to inclose and support the Thigh to the former Bolsters; the Strapper thereof broad and very strong, with broad Girths, and with very strong and broad Buckles cross-girded, so as that the Saddle may rest firm on his Back, whereby the Seat will be easie, sure, and certain, without motion, leaving the near Stirrup-Leather almost half a hole longer, than the right Stirrup; and although that the Horse be gentle, yet because he hath a new Master and Rider not known unto him, being neither assured of himself,

self, nor of that his Rider would have him do, so as that it may be truly said, that he is not himself, but that he is troubled in mind: Therefore to keep him from fear and perturbation, I would have a quiet and staid Horse also saddled to be rid before him, and then bring them both to the Block; but the old Horse first, and then the Colt, at which time let the Rider use all the mild and gentle words to the young Horse, making the Reins of the Bridle even and just, holding them in his left hand, not stiff, nor altogether remiss or loose; and as soon as he is mounted on his Back, let him sit quietly there a while, lest any sudden motion should breed any perturbation in the Horse, and until the Rider have settled himself in his Saddle, his Nose directly answering the Horses fore-top, betwixt his Ears, his Legs hanging straight down, neither thrusting down the Toe, nor lifting up the Heel, but with his Foot with such evenness in the Stirrup, as if he stood upon the Ground, the Stirrup-leathers rather short than long, winding his Toes somewhat nearer to the Horses side, than the Heel, holding the Reins even and just with his Crest, even with the point of the Withers, a little above the Main, with his Thighs and Knees close to the Saddle, and his Feet resting in the Stirrup in due place, not too far thrust into the Stirrup, with an upright and straight body, his Ridge-bone answering the Ridge-bone of the Horse, so as the Horse and Rider may ever seem to be of one body in all motions; during which time, let the Rider claw the Horse with his hand, to remove from him all fear, or hard conceit of his Riding: That done, let him go forward two paces fair and softly, and stay again, making much of him, and



and so pace softly and quietly to the place where the Rider intendeth to tread out a Ring; all which must be done by the Rider boldly, and without fear, and as he must be thus used in going forward, so must he be used in Treading and Pacing out of the Ring, in some new-plowed Ground, that is most deep of Mould, where first let the old Horse enter betwixt two Furrows, so far as the Rider may have space enough, and Mould enough, and follow with the young Horse close to him, which will cause him the more willingly to go, because he is directed and guided by the old Horse, by which meanes he shall not be any way discouraged: Then let the old Horse (the young Horse following) enter on the right hand, overthwart the Furrows, and tread out twice together a round Ring, containing in circuit about 30 paces, and being come about the second time where he began, let him tread out the like Ring on the Left-hand, and after he hath gone twice about, let him begin again on the Left-hand, and so continue until he have gone four times together about the left Ring, and the right six times; that done, let him go fair and softly out of the Furrow where he began, about 30 or 40 paces, and there stand still, keeping his head and his body right in the path, remembring always to have some go by, to signifie his true performance, and to help, if need be; and then let him go very gently back from the place he came, and there let the Rider alight, and make much of him, by Coying him, and giving him a little Grass, Hay, or Bread in his mouth, to procure and win Love: And thus let him be used two days with a Horse before him, and after him. Let him then lead and begin himself, to tread

tread and pace the Ring in this gentle manner, for the space of ten days, keeping a temperate, staid, and fine hand upon the Reins, with a sweet feeling stay, carrying his Fore-head as Rams do when they go to fight, whereby he shall not only Rein well, but bear his Head staid and light; and when that he knoweth what to do, and that for the same he is always cherished, he will strive to do it faster; Through the Riders continual keeping of his hand stiddy, the Horse will do it with a wonderful pride and delight, by giving him liberty; but a too hasty treating of the Horse, will work the clean contrary.

In the pacing of the Ring, the Rider must not carry any over-hard hand, to dull the sense; but so temperately, that the feeling may be always fresh; otherwise by the violent, by much galling his Nose, whereof he would willingly have ease; to avoid the same he will set his Head and his Neck awry, the true use whereof is, that standing in the Furrow just and straight with his body, the Rider moves him gently to go forwards, and in the very motion, turns him on the right hand, by drawing very softly the right Rein shorter with his right hand, lower under the Pommel of the Saddle, whereunto if he yield (as no doubt but he will) especially having trod the same before, let the Rider presently make much of him, neither drawing nor slacking the Rein: At which time, for his doing both for the ease of the Rider and the Horse, if need shall be, let some skilful person (but his Keeper were most fit) come on his right side to his fore-shoulder, and thrust him in by little and little, & the Rider also by the Calf of the right Leg, and the Clack of his Tongue to be a help to make him go forward, if the Horse be such a one as I have described he will do it; but if he should not in the ve-

ry motion of the turn, then let the Rider draw the Rein with his hand, as before, whether it be on the right hand, or on the left: All which must (as hath been said) be done by gentle dealing, so as that the Horse may hope for rest and quietness, whereby he will be ready to do whatsoever his Rider will: But if he be a rammage Jade (as I said before) and of an evil disposition of Nature, for my own part I esteem him not of any worth, nor fit to be kept. Having spoken of Pacing of the Horse in the Ring, it followeth, that after the ten days are expired, the Horse be taught to Trot the Ring, which he must begin in a slow and gentle Trot, as he was in the first beginning of Pacing, increase his Ring-turns by two and two every day, until he make ten Turns for the left Ring, and twelve for the right, which will augment his swiftness, whereof he should be restrained until he be most perfect, and then he will do it with the greatest Grace and Pride that may be imagined, which is the true property and quality of all Art, evermore to affect and effect to perfection; during which time of the beginning of Trotting, he must not be ridden with a Wand, nor wear any Bit, until he be most perfect in his Trot, stop and turn well on both hands, and not by any means suffered to Gallop, until that he can also perfectly advance. By taking this course he will be just in his Pace, just in his Trot, with a staid Hand and Neck, being the chief lustre and goodness that Nature and Art affordeth.

Wherefore, when you begin to Trot the Ring, be sure that at the first he be moved thereunto as gently and quietly as you can devise, and so every Action whatsoever, upon a restrained, temperate, and firm

firm hand, with a sweet stay, and with a true Rein, that is, that his Nose be just under his Fore-head, neither too much out, nor too much in, which is the just placing and setting of his Head, which will make him to have a pleasant Mouth, when he cometh to wear the Bit, in which consisteth the chief point of Horsemanship, because he is so to be maintained in all his Actions, the which is most easie to be done, and to be continued, if the Horse be of perfect shape and spirit; but if he should make resistance, for that he is either rammage or evil broken, then Trot him swiftly with quickness of Voice, Rod, and Spur; for the time of his Trotting, is the fittest time to make him forget his toys, and to attend his way; and if all this will not help, then spare not to Gallop him; and if this fails, then be sure he will be a Jade from the beginning to the end; for a Horse of a good temper and perfect shape, can never be of so bad a Nature and Quality.

I shall now next discourse, how to make the Rider perfect in stop, after he hath ended the number of his Ring-turns, which is to trot his Horse right out in the middle Furrow betwixt the Rings, until that he come to the place of stop, and there to make a pretty stay, keeping his body right in the path, wherein if his whole body or any part stand overthwart, seek not at first, thorough your too much passion, to correct him for the same; but let a Footman direct him to stand right in the path, as we said before, by thrusting in that part that standeth out of order, or that he may cause the Horse to go further in the same path, and stop him, holding that Rein straighter on that side, whereon he most forgeth his head, then afterwards the other, which will

will inforce him to keep right; which when he yieldeth, ever cherish him, and after it will be good to trot and stop him on a ground that is a little steepy, which something falleth, and immediately riseth: But when he is perfect, then he may do it on a ground that is very steep: But to teach him to go back, the Rider must (as I have said) keep a firm staid hand upon him with some liberty, and then gently striking him on the Neck with his Rod, in that instant of time say, Back, Back: But if he refuse, let a Foot-man with his Rod gently strike him on the Knees, and so by the gentle pulling in of his hand, and fair means, win him, and when he yieldeth, cherish him.

Having shewed how to ride a Horse without a Wand, Bit, or Spur, I will now shew the Rider how to manage all three, together with the true use of the hand upon the Bit, one of the chief and only principal points of Horse-manship. First therefore, when he rides with a Wand, let him take it very warily, that the Horse be not frightened therewith, and to ascertain the Horse thereof, presently after he hath received it, toy and scratch him about the neck with the end thereof, and for the carrying of it, it must be carried in the right hand, with the point upright, and when that he must use it, let the point fall close unto him, as occasion shall require; but in his management of it, let him lay his hand upon his right Thigh, and his hand cross the Horses Neck, and when he is almost ready to turn on the left hand, let him lift up his hand and Rod, and hold the point right forth on the right side against his Eye, and as he chingeth turns, so let him change his Rod on the one side and on the other: But if his Horse will

will not turn on the side he would have him, let him strike him on the contrary side; and when he is any way disordered, let him carry his Wand on the contrary side; and when he would have him carry his fore-part right, strike him gently on the shoulder or fore-legs, and when he would have him lighten behind, strike him on the Rump and Hanches: And thus much for the use of the Wand, as occasion shall serve.

Now for the use of the Bit, which is an Instrument only guided and directed by the hand, and because the ground of the Art of Riding dependeth only upon the right use and true government of the hand, being guided by reason and discourse, so as the Horse in all motions and actions, is, and ought to answer to that motion.

First therefore, let the Bit that he first bit his Horse withal, be gentle and pleasant; yet so that the gentleness cause him not to despise the Rider, nor the hardness drive him to despair; for you must understand, that knowledge always presupposeth reason, and reason sense, and sense reason: All which consist in a true Mediocrity, and therefore amongst the most learned Precepts that were written in the Temple of *Apollo*, in Greek, this was in the second place, Nothing too much.

For if he press him with the Bridle, if he carry his Head well, yet must he presently ease his Bridle-hand, and make much of him, because he sheweth himself obedient to him; and whensoever he doth any thing well, and with delight, the Rider must be very careful not to vex him, but ever so to win him, that he may be willing to please him. So likewise when he bears a firm hand with a stay, that

that thereby the Horse doth bring in his Head, and yield to his hand; yet he must shorten the Reins of his Bridle, till his Head be settled in its due place, that is, as hath been said, neither to carry his Head too much out, nor too much in, and still to maintain him in the form of his doing; yet that it exceed not Mediocrity or Temperature, but remain light on the Head with a sweet Mouth.

Thus having shewed the Rider, that it must be done by keeping this order, I proceed: Let him stay his Horse temperately with an even hand, as his resistance shall require, without giving any other liberty, than with his Rod to strike him gently upon the bowing of his Neck, provoking him mildly with the Spur on that side on which he most wrieth his Buttock; to the end that he may go just, until he draw back one of his Fore-feet, which if he do, make much of him, and then stay a while, and do the like, drawing away the Bridle; for the former cherishing will make him to understand, and then will he go lightly back with both the Fore-legs, when he is touched on the Neck with the Rod, saying with a loud Voice, Back: At which Voice, with the feeling of the Rod, and drawing of the Bridle, he will go back to the Riders desire; and always after when he is out of the due and true way upon the Bridle, let him do the like, that is, to go back in form aforesaid. And although some disorder be committed, let not the Rider despair; for he shall find him easily won to a good Mouth, by this use of a temperate and a firm hand, which is the Mediocrity of slackening and drawing, which is properly named a sweet Stay, which the *Italians* call *Dolce Appoggio*, making him light upon the hand, champing the

the Bit with great pleasure, and a staid Head in due place, the true Tokens whereof are just Rains: Staid, and a light Come-head with pleasure on the Bit being properties inseperable in every perfect shaped Horses actions: But because it may seem very difficult to have a continuance of perfection in any action, although it is common upon stop, or standing still, to be in order; yet perhaps upon motion he will leave playing upon the Bit, and bear up the Head, especially upon the main Carreire, which proceeds from a want of true knowledge, how to maintain and continue the hand just and firm with a sweet stay, so that he may take pleasure on the Bit; and therefore how to maintain a Horse both in furious and quiet doings, is to be considered of. If then that at any time he make any disorder, note it diligently, then stay him, and make him go backward, as you did before; for in going back, he will bring himself to his right order again, then presently make much of him, and forthwith move him forwards; so must he be used in Treading of the Ring, first gently upon the Pace, upon the Trot, and upon the Gallop, in practising whereof, he must precisely observe that he be done with a temperate, staid, and firm hand, otherwise he will gape, thrust his Tongue upon the Bit, or over the Bit, to defend himself, thrust his Head out suddenly, pluck in disdainfully, or else shaking or moving of his head one way or other, to be freed from the pressing of the intemperate hand, which is to him violence, and contrary to Nature, the which Art should evermore labour to please. The true form and practice of drawing the Bridle, is also to be learned, which is, that being Mounted in the Saddle,

dle, let the Rains be drawn equal; and if the Horse know not the Bit, then let the Bit be very slack, and let the Rider hold the Rains in his left hand, with the Little-finger and Ring-finger between, under the Pommel of the Saddle, as near the Withers as he can scarcely perceive, the which he must not remove untill he feel the Horse to stay upon the Bit, and there hold him without staying or further drawing, until he perceive whether the Head stand in the true form; which if it be not, then let him a little yield his left hand again, and standing so a pretty while, bring his left hand to his former place again, where the Horse made his first stay upon the Bit; then let him draw his Rains with his right hand somewhat more through the left hand, as before, but so little and gently, as scarcely to be perceived; for so must all the motions of the hand be, and then keep it steady and firm a pretty while; and if he yield, though very little, let him keep his hand still at one stay, neither slackening nor drawing it, whereby he will feel the ease that he hath got by yielding of it, and then presently make much of him. But if it so happen that the Rains fall slack, let him not remove his left hand, as before; for they must not be slack until they stay again upon his right hand, whereunto whensoever he yieldeth, make much of him, continuing still in the same manner to sollicit him, till his Head be in its due place: After which time, if he bear not light, let his Rider strike him gently upon his knees of his Fore-legs, to make him to go back, whereby he will bring in his Head, and then will the Bit move, and his hand find ease; but let him be very careful at that instant, to keep his hand so firm, as that he neither slack nor draw

draw in, to the end that he may feel and retain the ease of his own motion of yielding, which willingly he will not lose, it being delightful to his Nature, but take some pleasure to stir the Bit in his Mouth, and go backward withal with it, which when the Rider finds out being won, with observation of good order, he may be brought to a more continual perfection. Thus I have shewed the Rider so much of the Art as may help him: But if the Nature of the Horse be opposite and repugnant, as in the greatest number of Horses, it is, as I have said before, to no purpose; however for a time he may seem to be taught, yet questionless it cannot be of any continuance.

1. Therefore let the Rider observe, that when he is teaching of his Horse herein, or any other Lesson, that he do not trouble him with any other thing at that time.

2. That he do not suffer any one to ride him, until he be perfected by himself in such Lessons as he taught him, lest he should be confused by the diversity of Teachers, and their manner of Teaching.

3. That when he is brought to a just stay of head, and an assurance of the Bit, that then his Rider is to maintain him therein, to a fulness of perfection.

4. When he is out of order, then let him stay him, and make him go back, as before was mentioned.

5. When he is in order, as we have often expressed, make much of him, and not stay long, but with a firm hand, gently put him into his Pace again.

6. If he continue in good order, cherish him, guiding his body with a pleasant and gentle motion

of the Calves of your Legs, move him to do it more expeditiously, which if he be of a good Nature, he will speedily perform; always remembering to keep a firm hand, unless he bring in his Head.

7. If his Trot continue not lightly upon your hand, stay him, and cause him to go back, which will bring him in order again, and then gently put him into his Pace, and so to his Trot, as before; which being well done, cherish and delight him with all the sweetness that you may, so that the Rider may overcome in his love thereby, and guide him by some leading Line, and give him a little Grass or Hay out of your hand, Tickle, Scratch him, and speak to him most loving words, which will make him at his next Exercise to do all to his Riders greatest content, and within twenty days or thereabouts, he will pace and Trot in such order, as that the Rider may always afterwards Trot him most swiftly in the Ring, or in the Manage.

8. In his swift Trot, by all means keep your true seat and firm hand, so that he lose not that excellent grace and form prescribed; but do not Gallop him, till he be just perfect in his swift Trot, and then out of that Trot, to put him to a swifter and quick Gallop in the large Rings, even to the stop: But beware that you draw not your hand hastily to you, but by a little sway of your body, back and hand together, and sway your hand there, until he retreat a step or two, and there stay him, and suffer him not to go forwards, and at that instant make very much of him, and so let your Hand and Body re-assume the same place again.

9. I dare to assure the Rider of the right use of what

what hath been said, and of the success thereof. Therefore let him follow his Practice, and continue it: Let him pace his Horse overthwart some deep Fallow, as fast as he can for half an hour, but suffer him not to Trot, keep his hand in a firm and temperate stay, as before; and if he find his Head in due place, his Carriage light and pleasant upon the Bit, he may assure himself that he hath gained the perfection of the hand, and the true use thereof for the teaching and making of his young Horse; wherein observe, that if he be of the perfect shape, his Head will be in the due place, and light upon the Bit without Art.

I now intend to discourse a little of the Horse that is ready taught, and brought to perfection: With him the expert Rider hath small use of a Rod, or any other help, but to keep his true, just, and perfect seat, because his Horse, by the least token of Bridle or Spur, will do all things in such time and measure, as the Beholders will judge the Man and Horse to be but one Body, one Mind, one Will; and therefore how the Rains should be carried, placed, and used, is the only thing to be spoken of.

The Rains he must hold in his left hand, placing the little finger and the Ring-finger betwixt the two Rains, and the Thumb close upon the Rains, so as that the hand remove not from the Crest of the Horse; for by the motion of the hand, it is signified to the Horse which way you should have him turn, and slacking it on the other: The order and manner whereof hath been, and is diversly used of the best Horsemen, and therefore I leave it to every mans use, as he findeth it to be most fit: But in the running of the Tilt, where the Horse neither doth

nor can turn, the Rider must not draw the Bridle towards the Tilt, but only strain the Rein that is next the Tilt, to make him carry his head towards the same.

1. Because the true shape and goodness of the Nature of the Horse is it that Art attendeth and worketh upon; in those Horses the Rules of Art have perfection with continuance, so as that the Horse that is of perfect shape and body, shall not indanger wind, or limb, or deformity of body.

2. Next his person shall never be in peril by rearing or running away.

3. Nor shall the Rider ever be greived with heavy bearing upon his head, but perform all with great delight: Neither shall he need Canetsale, Musrole, Martingale, or such like, but only false Rains.

4. And lastly, this teaching will manifest the difference betwixt the true knowing and ignorant Rider, which will be perceived by the very Horses doings; the Horse doth represent and express himself most beautiful, and thereby renders the expert Rider and the Horse to appear most nobly, with such delight to the Beholders, that they will seem to be ravished with it: All which is attained by discretion, taking of time with moderation and temperance, which is little regarded, and of very few, who will rather chuse to ride out of order, and that with much extremity of Spur and Rod, that for want of breath they commit many strange disorders, whereby the poor Horse is most cruelly tormented, having no other to ride him but one without discretion, a mad man. After your Horse hath

hath perfectly learned swiftly to trot, and to stop, as well to go back, then ought he to be taught rightly to advance, which is by lifting up his forefeet just and even together, like to a Goat, somewhat above the Ground, and so to let them fall even and just, twice or thrice together; The true doing whereof still causes him to make a just and perfect manage, and a ready and true turn: For the attaining whereof, trot him gently forty or fifty foot in some plain way, and give him a just stop, which he will truly perform, because he hath perfectly learned the same. Let him always keep a perfect, steady, and pleasant hand on the Bridle, then instantly with a mild voice, Hup, Hup, striking him at that instant with his Wand on the right shoulder, and also on both the Calves of his Legs together, but spur him not, if possibly without it he will advance, the which with a little labour and patient teaching, no doubt but he will attempt to do twice or thrice together, which if he do, then in that instant let his Rider make much of him (although he did it very meanly) then let him pause a little time, and give him breath, and trot him again in the same manner the like distance of ground, and as before; so gently use him again: But if he do not better every time he is taught, he must be still solicited, until that he do better, and then after that he can in plain ground perfectly advance, to teach him gently upon the hanging knole of a Hill, to bring him perfectly to stop, and run sliding upon his Buttocks or hinder Legs, which is very handsome, beautiful, and graceful for Manage and Turn; and therefore let him do it before he is taught any other Lesson, and then he will do it upon a soft trot, upon the swift trot



and afterwards upon a soft Gallop, and not before; but never upon a swift Gallop, until that he be perfect both in Turn and Manage. If he advance too high, and not just and even, with a good grace as he ought, then may the fault be speedily found, and easily amended by immediate correcting him with one even stroke over his Legs, the Wand again ordered and conveyed out of his sight, with a sweet staid hand on the Bridle: Few such tryals will amend and perfect what is amiss in the Horse.

And whereas some appoint many helps for Horses that are harder to turn on the one side then on the other (although I do confess their general desire is more apt to the left hand then to the right) yet to a Horse of good Nature and perfect shape, a little Art will speedily teach him to teach others: But if he be a Jade, one may as soon teach an Ass to play upon an Harp.

It now remaineth to shew, when to make the half Turn and the double, the Chembetta, the Manage, to pass a swift Carriere, the Cornet, and such like.

The next Lesson for him to learn, after he is perfect in those I have set down, as I promised, is to make a true and a just half double Turn, which should be in this manner. First, when the Rider hath gently trotted, stopped, and advanced his Horse the length of a short Carriere, let him teach him gently and mildly to make the half Turn (beginning alwaies on the right hand) that is, for the Rider to turn him with the help of his left Leg, that his head may stand that way, which before his Tail stood, which is called a Half Turn, because he maketh his half Circle: But if in the Turn he

set

set his head that way it stood at the first, that is a whole Circle, and therefore called a Whole Turn: But let him first do the half Turn perfect, which must be done by helping him with his Voice, and Calf of his Leg, and not at first by any means to have him spurred, if he can otherwise be brought unto it; because a Spur is a correction, which is not to be used but at that instant time when he hath committed an error, and not when he remaineth ignorant, in what he do; by which means undoubtedly, being a sensible Creature, he will perceive his errors and offences, whereby with little correction he will easily amend any fault, Let the Rider never go about to make him despair, but continually encourage him; for having formerly attained a perfection of a jult, even, and swift Trot in the Rings (the very true ground of all other Lessons) he will easily turn on the right hand, setting his head that way that his Tail stood; the which being perfectly attained, then let the Rider close it up with another half Turn on the same hand, with the prescribed help, setting his head and all his body in the same way it was at the first; then give him breath, and make him do as much on the left hand, with those other prescribed helps, and so change from hand to hand, leaving always on the right.

1. In the doing whereof, observe whether he bring on the contrary Leg orderly.

2. That he do it after the first bound of advancing, and after the second or third bound.

3. That after he is perfect in doing the whole Turn, that the Rider make him to do it swiftly and soundly. without stop or stay of the half Turn, and



and speedily in the closing of every whole Turn, and in as narrow a compass as may be.

4. That the Rider (as hath been said) begin on the right hand, and end on the right.

5. After he is perfect, as aforesaid, give him on each hand three whole Turns, whereof let the first be very fair and softly, beginning at the right hand, and ending on the right; in performing whereof, the Rider must alwaies help him with his Tongue, his Rod, and his Leg, by which continual use, before he teacheth him any other Lesson (which should never be done, unless he be perfect in the Lesson he is learning, so that the Rider shall in the end, with discreet and temperate teaching, bring him to an admirable perfection, keeping time and measure, that the one be not swifter then the other; if either, the last, which for the most part is as speedy and perfect.

Now to proceed to the Managing thereof, the true signification whereof is to be rightly understood by such as intend to be expert in Horsemanship; for *ignoratis terminis ignoratur & Ars*, to be ignorant of Terms is to be ignorant of the Art: I take it to be a compound word of the word *Manus* and *Ago* (the hand in this Art being Instrument of Instruments) doth guide and govern the Horse to every action, and therefore may fitly be said, *Manus agere*, or as the Italians properly call it *Maneggiare*, which is as much as skilfully to handle, And therefore when the Rider shall exercise the Horse perfectly and gracefully in his pace, trot, stop, advance, double, or single turn, gallop, leap, capriole, cornet, assault, or whatsoever the hand being the principal *Aktor* or  
*primus*

*primus motor*, may truly and aptly be called Manage; which cannot so rightly be done without the general knowledge of the practice of the Precepts of the whole Art.

And although many worthy Horsemen have and do only rest and rein Managing to Galloping, and to bring a Horse to and fro one self some path, by a half rest, and when the Rider manageth with a half rest, causing the Horse at the end of every managing path, after he hath stopt, to advance twice together, and at the second bound to turn and rest one bound: Doth not the Rider therein exercise the Trot, the Stop, and the advance; and the Turn which he formerly learned, and according to the same manner? or when he manageth with the whole rest, by turning him immediately upon the stop, without any carryance or rest at all, which only is most common with us in *England*; and yet the managing of the half rest is most necessary for the attaining of perfection: Doth not the Rider keep and maintain the Horse in one path, one place of stop, making him to keep his ground, and therein carry his Head, his Neck, his Legs, and his Body just, closing his Turn roundly, and in a narrow room, with the true time and measure in every action, as hath been taught? How then can Managing be properly referred to one only action, when it is the perfect acting of every Action and Lesson he hath learned? wherein when the Riders Horse is most ready and perfect, he may increase the often doing of his Lesson as he will, and make an alteration of his Turns and Exercises, to find out the truth of his obedience; and when the same are first artificially and then exactly performed

ed, then may the Rider be truly said to be a perfect Manager.

Now are to be shewed, what are the principal things that are to be observed in the true Managing of a Horse.

He is taught his manage with a soft Trot, and not with a Gallop: my reason is, because thereby he may be at the first sensible of apprehension what to do, and how to do, and that gracefully, by the bowing of his Houghs behind, by turning round with the Chambetta, which is by holding up the fore-foot on the side he should turn, whilst he brings over the contrary Leg, and setteth it not down until he have closed his Turn, so as hereby he shall carry both his fore-feet above the ground, not trailing upon the ground, which is disgraceful. When the Rider teacheth his Horse (which is after he can stop well) let him advance before, and turn readily on both hands, then with a soft Trot come to the place of stop about 20 paces in length, and make him advance twice together, and at the second bound turn him on the right hand, as hath been said, you must alwaies begin, helping him, so that by bowing of his Houghs behind, he move his forepart orderly, then immediately in a gentle manner trot him back to the place you came from, and then thereafter he hath made his stop, at the second bound of his advancing turn on the left hand, observing the like order, until the Rider have gone ten or twelve times, and at last cause him to advance twice together. And thus much for the half rest, which is to advance thrice, and at the third bound to turn; but be sure he be perfect in one Lesson before you teach him another.

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In all the Riders managings. let his body still accompany his Horse with a good grace; and when he hath very perfectly learned his Manage on the soft Trot, he may manage him with a Gallop, giving him on each hand one single Turn; and a little before he is turned, let the Rider hold his Wand on the contrary side, whereby he shall know on what side to turn; and at the stop, let the Rider make him to advance, either with his Voice, Rod, or Spur, alwaies being careful to give him breath, evermore beginning with a gentle Gallop, until that he be perfect. But I wish the Rider so to use and exercise his Horse, that he may be long Master of so good and so perfect a Horse, and not to spend or spoil him in a little time, in teaching him needless toies, as some ignorant Horsemen use to do.

After the Horse is perfect in such Lessons as have been formerly taught, and is grown to full and perfect strength, then let the Rider begin with him with a short Carriere in a fair sandy way, and with a lively Voice put him forward, forcing him to run swiftly, roundly, and smoothly, with a steady hand, and lightly to stop himself on his Buttocks; then let him turn him on the left hand, and softly pace him to the other end of the Carriere path, and there stop him, and turn him again to the right hand, and so leave off, and rest him. And as this passing Carriere or swift Gallop must not be done or taught, until the Horse be, as hath been said, most perfect in all the Lessons; so must it be done very sparingly and seldom, as once in a month at the most.

CHAP.

## CHAP. V.

*Of the Bound, Leap, Yark,*

**S**OME have a desire to have their Horses to bound, leap, and yark: and though I know it might be most exactly done by the best spirited Horse; but tending altogether to their destruction, and a matter rather of foolish delight than of any use, I leave it to the disposition of the Owner, wishing much rather to have dangerous Exercises omitted than practised, unless that there are more plenty of Horses that are fit for the same; therefore any Reader cannot admire that he meets with so short a Chapter.

## CHAP. VI.

*Of the Capriole and Cornetti.*

**T**HE difference betwixt these two is, that the Capriole or Goats-leap is alwayes in going forwards, and the Cornetti still in one place. These are to be learned and taught by one order, but neither of them will be well learned, and therefore never exactly done, unless the Horse be very perfect to stop, which must be by much bending of the Elbow of the hinder Houghs, or Heels of the Horse. Now the Cornetti may in some sort resemble the dancing

dancing of a Bear at a stake; for when he danceth and pranceth up and down in one place, lifting his fore-feet even and just together, seeming to turn, if he might be suffered; which is never well done, unless the Horse be just and steddily of head and body, bowing the Hams of his hinder Legs, as if he would sit and slide on his Buttocks. And the Capriole is in the same manner, but still going forwards, seeming as though he would yark behind by advancing his Rump, but doth not; and as he doth it forwards, so will he do it backward and side-long.

Now the Rider need not teach his Horse either of these, until, as hath been said, he be perfectly exercised in those Lessons formerly mentioned, because these Lessons are only learned by stopping and advancing; the which, if he have once perfectly, and have long practised, then trot him sundry daies upon some hanging ground, and upon the Knole of the Hill on the same ground, make him to advance twice together at the end of the two paces, all the length of the Hill downwards, still remembring to cherish him when he doth well, to give him breath, that all his performances may be done with delight. And if he be helped with the word saying, Hup, and by the Riders Rod, by striking him on the fore-part of the shoulder, he will go from stop to stop, advancing both the fore-feet and hinder Loynes, with time and measure, as often as the Rider pleases, and in such a just, even, and staid manner, as will be very pleasant to the Beholders.

Now because I would not have the young Rider to begin any Lesson, but by the direction of a perfect Master, and in that course to continue; so must the young Rider endeavour with himself to know  
the

the reason of all his Practices, and therefore must be sure to be present at the Exercises of the most skilful Horsemen; and as *Solomon* saith, let his foot tread often upon their threshold. Let him be acquainted with the most expert Practitioners, and when he is able rightly to judge and to make a true difference betwixt good and bad; then let him practise as often as he can, and never doubt with good advice to become a perfect Horseman, so as to be able to teach whatsoever is fit for a Horse to do, and a young Gentleman to know.

## CHAP. VII.

*Short infallible Rules to be observed and practised by every Horseman.*

1. **D**O not gallop your Horse before that he can stop well.
2. Do not run him before he can stop in his Gallop.
3. Do not swiftly gallop him before that he can stop.
4. Do not make him a Runner before he be six or seven years old.
5. In all his doings, from the beginning to the end, keep his Reins true, and his head steady; for this Rule is the foundation of all other Rules.
6. In the morning early, when that he is empty, before he eat any thing, teach and exercise him until he be perfect; and after, twice or thrice in a week is sufficient.
7. In all his teaching and exercise, do them moderate-

derately and temperately, and leave him alwaies after the well doings of his Lessons, both in breath, and with a good mouth.

8. After he is perfect in his Lessons, let the Rider exercise him not alwaies in one place, neither let him confine him to a just and certain instant of time.

9. In the managing of his Horse, let him not Gallop him swiftly at the first, but with a soft Pace, and seldom with a Gallop.

10. In correcting of his Horse for an Error, let him correct him even in that instant of time when he Erred, and not otherwise; and when he had done well (as hath been often said) let him be sure to make much of him, and cherish him.

These following Rules must be observed afterwards, when he is ready in all his Lessons, and in the greatest perfection of all his strength; for before that time they do not much concern him.

1. Distemper gather roundly.

2. Go on smoothly.

3. Bear his Head steadily.

1. Distemper Hand and Mouth.

2. Diminish not his Strength.

3. Else it will make him Over-reach.

In all his Teaching and Exercise, to observe,

1. Begin softly.

2. To go afterwards on more speedily.

3. To perform courageously.

Lastly, Let the Rider exercise and perform all his Actions and Motions with an upright Body, his Stirrups being short; let him keep his Legs and his Seat gracefully, in a comely and beautiful manner, and let him perform all he hath to do courageously, without the least perturbation of Mind,



*A true and brief way of Planting and Ordering of all sorts of Orchards, either Apple, Pear, Plumb, or Cherry, according to the Experience of the Author; being never before Published.*

**T**He principal occasion that moved me to write this small Treatise concerning Orchards, was, because very many of my Countrymen are so most abominably Cheated and Abused, by Buying several sorts of Trees of our Nurserymen, which having Bought, are so much Deceived in their Expectation, of Raising an Orchard to some considerable Growth and Benefit in a short time, by Buying Trees of the said Nurserymen, which hath proved so prejudicial to the Nation, that Thousands might have enjoyed the benefit of their Labours in Planting of Orchards, had they not been Deceived in their Trees, besides the great Charge and Uncertainty of their Growing. Now I shall briefly shew you how all sorts of People are abused in Buying Apple, Pear, and Cherry-Trees (but as for all sorts of Peaches, Nectellings, Apricocks, and all sorts of such kinds of Fruit, they can bring them up far better than any other, they having both, and giving them extraordinary attendance, so it is not

not convenient to shew the way of raising of them) which is thus: A Gentle-man, or Country-man, Farmer, or any other having provided his Piece of Ground, by Manuring and Enriching it with good store of Soil (for I suppose no body is so Ignorant to Plant without his Ground be well enriched) his next thing (as hundreds before him have done) is to inquire out a good Nursery, which no question but he may find very good, but he will find it bad enough before he hath done with it, or else he will speed better than his Neighbours, or the Author of this hath done before him, who having provided his Catalogue of several sorts of Trees, comes to the Nursery man, and desires to let him see such and such Trees, as are written in his Catalogue, which the Nursery-man willingly performs. The Gentle-man having viewed, marks them, and likes them exceedingly, agrees for 300, or 400, according as his Piece of Ground will take up; and are, questionless, very good Trees, straight, handsome, and beautiful to the Beholder: But when he comes to take them up, they stand so excessive close, that two thirds of the Roots are spoiled, and the Trees being in extraordinary proof, that by such time they come into the Country, the Trees are so withered and bruised, that not one in ten comes to perfection: And further, the Trees that you Buy of these Nursery-men come out of such a very rich Soil, that when they come to be Planted in the Country-mans Orchard, pine away to nothing; and after six years standing, have been forced to Plant them afresh, to his loss of time, great charges, cost, and Trouble. But still they run on, and delight to be deceived, and are of this opinion, that

those Trees out of the Nursery, being four or five years Grafted, will turn to an Orchard far sooner than any other way of Planting. But I shall shew you the true way of Planting and Ordering your Orchards, whether Pear, Plum, Cherry, or Apple-Orchards, with little or no Charge, and yet shall be an Orchard much sooner and better, and not come to the twentieth part, which will accrue by Buying the Trees out of the Nursery, as the Author hath proved by Experience.

In the first place you must seek out, if you can possible with convenience, such a piece of Ground that leans towards the South, or being a Hill rising towards the South, that the Sun might cast his Beams to the Root of every Tree through the whole Orchard, which if it be upon an exact level it cannot. Let the Ground be good by Nature, if you can; if not, you must enrich it by Soiling it, which will be no loss, considering the several Crops it will bear after it is Planted. Now having found out a place fitting for the purpose, cast up a high Ditch, and well Quick-set it, that so it may grow up with your Trees, to defend them as they grow up, if not Quick-setted before. Now having found out your Ground, and well Fenced it, you must consider what kind of ground it is, whether black Mould, Clay, Gravel, Sandy or Mamfic ground: According to the Nature of the Ground, you must get such Fruits as may prosper therein according to the several Soils; which five sorts many times happen in an Acre of Ground. I shall begin with the Clay-ground; all sorts of Winter-Apples do abundantly delight in a Clay-ground, being very well Soiled and made Rich: And I have observed, that your Winter-Apples,

Apples, as Pepins, Pearmains, Gilliflowers, Cunnings, and Harvey-Apples, which if you have them of the best bearing sort, growing upon a Clay-ground well Chalked, have been larger, firmer, and have endured two or three Months longer than that same sort of Apples growing upon a Gravel or Sandy Ground. Your next Ground is your Mamfic or Chalky Ground, which brings forth a very lovely sweet Apple, but not so big as the other, yet far sweeter, and will keep full as long, being fit for all sorts of Winter-Apples, and Summer-Pears, and Winter-Pears. Your next Ground is your Sandy Ground, which is only fitting for Summer-Fruit, and Cherries, which to make them thrive, you must well Chalk and Dung, at least a yard round from the bodies of the Trees, and a foot deeper then the Tree stands. Those Apples that love such a kind of Ground, are your Larding, French Pepin, Highnig, Robbers, and all other Summer-Apples and Pears, and you Duke-Cherries, and several others which will not last beyond *Christmas*, yet are true Bearers and excellent. Your next is your Gravelly Ground, which will bear excellent Fruit, being well ordered, until the Trees have taken good Root. You must dig the Ground above a yard round from the body of the Tree, and dung it very well, that so the Tree may gain good strength, and bigness of Root before it come to touch the Gravel, that so meeting with the Gravel, it may not stand at a stay, when it comes to Root in the Gravel, and then there is no doubt, but it will answer your expectation. Your next sort is your black Mould, which is the best, and will bear all sorts of Apples, Pears, Plums, and Cherries, with little-

little help; I do not mean your black sort of heathy Mould, which hath neither heart nor goodness, but to be cut up in Summer, and well dried, will make good fires in Winter. Now having found out your Piece of Ground, and ordered according to directions, measure your Ground, and so contrive to set the Row of Trees full South, at what distance you think most convenient, according as you do intend the Trees shall be suffered to grow in bigness, after your first Row is planted, which must be set at such a distance, that you may plant one between every four Trees, which will make a fifth. Now having made you understand the Charge and Decit of your Nursery-Trees, how they pine away coming out of so warm a place, and so rich a Soil, into such a Barren place; for make your Orchard as rich as you can, it is barren Ground to your Nurseries; for otherwise how could a man maintain his Wife and Children out of two or three Acres of Ground, if it were not extraordinary good? Therefore when your Ground is provided and made fit, imploy your Labourers or Servants to gather you so many dozen of Crab-stocks, Pear-stocks, or Cherry-stocks about 3 foot long, or thereabouts, according as it best pleases the Planter to have them cut. See your Crab-stock and the rest be in good proof, and not an old decayed stock, but green, and as clear without knots as you can; let them not exceed in bigness above three Inches about. Now having considered your Piece of Ground, what sort of Land it is, set it according to directions: Having so done, bush up every Tree, and lay some muckle Dung to every one, about half a yard round, do not cover your Trees too deep in Mould,

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three Inches above the Root is enough; for if you cover them too deep, a good shower of Rain will not reach the Root. This muckle Dung keeps the Roots moist and warm, and kills all manner of Weeds that would grow about the Body of the Tree. After they have stood one year, open the Bushes, and prune all the Shoots off that stand a foot below the top, leave not above three or four at most, and then you may put in Sheep, Calves, or Beasts: But if it be well manured, you may plant Garden-Beans or Pease, according as you find the Ground inclined. If your Orchard lie sloping, as is best, then make a Trench to lead to every Tree; you need not have many great Trenches, but two or three, and the rest small, and so you may water your whole Orchard for the first year or two without any trouble. When the Trenches are made, you ought to let your Crab-stock Pear or Cherry to stand three years at the least before you Graft, and two before you bud; for you will find they will bring forward your Graff more in one year than in two. You may Graff according as you see the Stock to prosper: Be sure to have your Graffs of the best sort of Fruit-Trees, and of good Bearers; for some sorts bear fair Apples, but very few.

When your Trees are Graffed according to your mind, of all sorts of choice Fruits, then at the Fall of the Leaf view all your Trees, and stop up the Cleft where the Graft was, put in some Pitch to keep the Rain out, and then it will be closed soon after, and the Tree grow the firmer. When your Graffs are two years shoot at farthest, Prune them all, and not suffer any to grow cross one another, especially in the middle of the Tree. If you find

some

some to shoot up straight upright, hang a little stone at the end of the Boughs, but one Spring, and you will make them grow how you please. Those that grow straight upright are seldom good Bearers, if they be suffered to grow; therefore you may remedy it at the first: But when they are grown too old, they will not be half so pliable. When they begin to bear, do not suffer them to bear above three or four Apples or Pears, but pull them off; for if you suffer them to Bear too much at first, it will put a stop to the Trees growth. This I think is Direction enough for any reasonable man to order his Affairs.

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